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Air Pollution Regulations in State Implementation Plans: Missouri

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This document has been produced in compliance with Section 110(h)(1) of the Clean Air Act amendments of 1977. The Federally enforceable regulations contained in the State Implementation Plans (SIPs) have been compiled for all 56 States and territories (with the exception of the Northern Mariana Islands). They consist of both the Federally approved State and/or local air quality regulations as indicated in the Federal Register and the Federally promulgated regulations for the State, as indicated in the Federal Register. Regulations which fall into one of the above categories as of January 1, 1978, have been incorporated. As mandated by Congress, this document will be updated annually. State and/or local air quality regulations which have not been Federally approved as of January 1, 1978, are not included here; omission of these regulations from this document in no way affects the ability of the respective Federal, State, or local agencies to enforce such regulations.

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Publication No. EPA-450/3-78-075

INTRODUCTION

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There have been recent changes in the Federal enforceability of parking management regulations and indirect source regulations. The October, 1977, appropriation bill for EPA prohibited Federal enforcement of parking management regulations in the absence of specific Federal authorizing legislation. Federally promulgated parking management regulations have, therefore, been suspended indefinitely. Pursuant to the 1977 Clean Air Act Amendments, indirect source regulations may not be required for the approval of a given SIP. Consequently, any State adopted indirect source regulations may be suspended or revoked; State adopted indirect source regulations contained in an applicable SIP are Federally enforceable. More importantly, EPA may only promulgate indirect source review regulations which are specific to Federally funded, operated, or owned facilities or projects. Therefore, the Federally promulgated indirect source regulations appearing in this document are not enforceable by EPA except as they relate to Federal facilities.

Since State air quality regulations vary widely in their organization, content, and language, a standardized subject index is utilized in this document. Index listings consist of both contaminant and activity oriented categories to facilitate usage. For example, for regulations which apply to copper smelters, one might look under sulfur compounds (50.2), particulate matter process weight (50.1.1), or copper smelters (51.15). Federal regulations pertaining to a given State immediately follow the approved State and local regulations.

Additionally, a summary sheet of the information included in each comprehensive document is presented prior to the regulatory text to allow one to quickly assess the contents of the document. Specifically, the summary sheets contain the date of submittal to EPA of each revision to the SIP and the date of the Federal Register in which the revision was either approved or disapproved by EPA. Finally, a brief description or reference of the regulation which was submitted is also included.

This document is not intended to provide a tool for determining the enforceability of any given regulation. As stated above, it is intended to provide a comprehensive compilation of those regulations which are incorporated directly or by reference into Title 40, Part 52, of the Code of Federal Regulations. Consequently, the exclusion of a Federally approved regulation from this document does not diminish the enforceability of the regulation. Similarly, the inclusion of a given regulation (for example, regulations governing pollutants, such as odors, for which there is no national ambient air quality standards) in this document does not, in itself, render the regulation enforceable.

SUMMARY SHEET

OF

EPA-APPROVED REGULATION CHANGES

MISSOURI

Submittal Date	Approval Date	Description
8/8/72	10/28/72	Kansas City Ordinance Chap 18; St. Louis Regs XVIII, XX, XXVI; Kansas City Regs X, XII, XVII; State Regs S-II, S-XIII, S-XII
5/24/73	11/8/73	Alert Plan for St. Louis County and State

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Section Number	Description
52.1324	General Requirements
52.1324	Review of New or Modified Indirect Sources
52.1339	Prevention of Significant Deterioration

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- 2.0 GENERAL PROVISIONS AND ADMINISTRATIVE PROCEDURES
- 3.0 REGISTRATION CERTIFICATES, OPERATING PERMITS AND APPLICATIONS
- 4.0 AIR QUALITY STANDARDS (PRIMARY AND SECONDARY)
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- 12.0 MOTOR VEHICLE EMISSIONS AND CONTROLS
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- 51.2 COAL OPERATIONS (includes Cleaning, Preparation, Coal Refuse Disposal Areas, Coke Ovens, Charcoal Kilns, Related Topics)
- 51.3 CONSTRUCTION (includes Cement Plants, Materials Handling, Topics Related to Construction Industry)
- 51.4 FERROUS FOUNDRIES (includes Blast Furnaces, Related Topics)
- 51.5 FUEL BURNING EQUIPMENT (coal, natural gas, oil) - Particulates (includes Fuel Content and Other Related Topics)
- 51.6 FUEL BURNING EQUIPMENT (coal, natural gas, oil) - SO_2 (includes Fuel Content and Other Related Topics)
- 51.7 FUEL BURNING EQUIPMENT (oil, natural gas, coal) - NO_2 (includes Fuel Content and Other Related Topics)
- 51.8 HOT MIX ASPHALT PLANTS
- 51.9 INCINERATION
- 51.10 NITRIC ACID PLANTS
- 51.11 NON-FERROUS SMELTERS (Zn, Cu, etc.) - Sulfur Dioxide
- 51.12 NUCLEAR ENERGY FACILITIES (includes Related Topic)
- 51.13 OPEN BURNING (includes Forest Management, Forest Fire, Fire Fighting Practice, Agricultural Burning and Related Topics)
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(12.0) Regulation S-I AUTO EXHAUST EMISSION CONTROLS

A. Definitions

The following definitions shall apply to these regulations:

1. Motor vehicle - Any self-propelled vehicle.
2. Vehicle - Any mechanical device on wheels, designed primarily for use on streets, roads, or highways, except those propelled or drawn by human or animal power, or those used exclusively on fixed rails or tracks.
3. Motorcycle - A motor vehicle operated on two wheels.
4. Motor tricycle - A motor vehicle operated on three wheels, including a motorcycle with any conveyance, temporary or otherwise, requiring the use of a third wheel.
5. Model year - The annual production period of new motor vehicles designated by the calendar year in which such period ends, provided that if the manufacturer does not so designate vehicles shall mean the twelve month period beginning January 1 of the year specified herein.
6. Positive crankcase ventilation system - Any system or device which prevents the escape of crankcase emissions to the ambient air.
7. Commercial vehicle - A motor vehicle designed or regularly used for carrying freight and merchandise, or more than eight passengers.

B. Ignition System and Engine Speed

All 1968 and subsequent model year gasoline powered motor vehicles shall be maintained so as to be in compliance with the following requirements:

1. The number of revolutions per minute of an engine while operating at idle speed shall be in accordance with the specifications, and determined under conditions, published by the manufacturer, but in no case shall the idle speed be less than the minimum specified in such published specifications. Revolutions per minute shall be determined by a tachometer or other device which shall be tested for accuracy and precision at reasonable intervals under such terms and conditions as the Executive Secretary may direct.

2. Ignition timing of an engine shall comply with the published specifications of the manufacturer as determined in accordance with procedures and conditions specified by the manufacturer.

3. All cylinders shall be firing.

C. Crankcase Ventilation Systems

The positive crankcase ventilation system on all 1968 and subsequent model year gasoline powered motor vehicles, except motorcycles and motor tricycles, and all 1969 and subsequent model year gasoline powered motor vehicles, including motorcycles and motor tricycles, shall meet the following requirements:

1. The plumbing and connections shall be properly connected as installed by the manufacturer and free of obstructions and leakage.

2. There shall be a negative pressure (suction) at the inlet of the crankcase ventilation valve.

3. The crankcase ventilation valve shall be freely operative so as to regulate the flow of gases through the system.

D. Exhaust Emission Control Systems

1. Air injection systems

Exhaust emission control air injection systems on those gasoline powered motor vehicles so equipped by the manufacturer shall operate so that:

a. The air delivery hoses, connections, and air distribution manifold shall be properly connected as installed by the manufacturer and free of obstructions and leakage.

b. The air compressor drive belt tension shall be within manufacturer's specifications.

c. There is a positive air flow from the air pump to the air delivery distribution manifold.

d. The check valve prevents any reverse air flow from the air distribution manifold out through the check valve inlet.

e. The anti-backfire valve, gulp-valve, air bypass valve, or other similar device with the same function permits the passage of air from the air pump to the exhaust manifold or manifolds, except when the carburetor throttle is closed rapidly from an open position as in deceleration.

2. Engine modification systems

   All vacuum control valves, vacuum lines, mechanical linkage, electrical circuits and switches peculiar to certain engine modification systems shall be properly connected as installed on all 1968 and subsequent model year gasoline powered motor vehicles so equipped by the manufacturer.

3. The requirements of this section (D) shall apply to all gasoline powered motor vehicles with the following exceptions:

   a. Vehicles of 1967 or earlier model year.

   b. Vehicles not equipped by the manufacturer with exhaust emission control air injection systems.

   c. Commercial vehicles of over 1,000 pounds designed capacity.

   d. Motor vehicles with an engine displacement of less than 50 cubic inches (819.35 cubic centimeters).

(2.0) Regulation S-II APPROVAL OF PLANNED INSTALLATIONS

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Greene Counties.

B. Definitions

1. Commenced - an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a binding agreement or contractual obligation to undertake and complete, within a reasonable time, continuous program of construction or modification.

2. Construction - fabrication, erection, or installation.

3. Modification - any physical change in, or change in method of operation of an air contaminant source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.

4. Startup - the setting in operation of a source for any purpose.

5. Owner or operator - any person who owns, leases, operates, controls or supervises an air contaminant source.

C. General

1. No owner or operator shall commence construction or modification of any air contaminant source after the effective date of this regulation without first obtaining a permit from the Executive Secretary.

2. Each application for a construction permit shall be accompanied by site information, plans, descriptions, specifications and drawings showing the design of the source, the nature and amount of emissions, and the manner in which it will be operated and controlled.

3. Any additional information, plans, specifications, evidence or documentation that the Executive Secretary may require so be furnished upon request.

4. No permit to construct or modify shall be issued if it is determined that the proposed source will prevent the attainment or maintenance of ambient air quality standards or violate any of the regulations pursuant to Chapter 203, RSMo.

5. Upon receipt of an application, the Executive Secretary shall act promptly, shall notify the applicant in writing of his approval, conditional approval, or denial of the application. The Executive Secretary will set forth his reasons for any denial.

6. The Executive Secretary may impose any reasonable conditions, upon a permit, including conditions requiring the source to be provided with:

    a. Sampling ports of a suitable size, number and location,

    b. Safe access to each port,

    c. Instrumentation to monitor and record emission data, and

    d. Other sampling and testing facilities.

7. A permit may be cancelled if construction or modification work is not begun within two (2) years from the date of issuance, or if work is suspended for one (1) year.

8. Any owner or operator subject to the provisions of this regulation shall furnish the Executive Secretary written notification as follows:

a. A notification of the anticipated date of initial startup of source not more than 60 days or less than 30 days prior to such date.

b. A notification of the actual date of initial startup of a source within 15 days after such date.

9. Within 60 days after achieving the maximum production rate at which the source will be operated, but not later than 180 days after initial startup of such source, the owner or operator of such source shall conduct performance test(s) in accordance with methods and under operating conditions approved by the Executive Secretary and furnish the Executive Secretary a written report of the results of such performance test.

   a. Such tests shall be at the expense of the owner or operator.

   b. The Executive Secretary may monitor such tests and may also conduct performance tests.

   c. The owner or operator of a source shall provide the Executive Secretary 15 days prior notice of the performance test to afford the Executive Secretary the opportunity to have an observer present.

10. Approval to construct shall not relieve any owner or operator of the responsibility to comply with other local, state and federal regulations.

D. Exception:

1. Fuel burning equipment which use gas or oil of grade #3 or lighter for space heating, air conditioning, or heating water is used in a private dwelling; or has a heat input as specified by the manufacturer or designer of less than 350,000 BTU's per hour.

2. Mobile internal combustion engines.

3. The construction of a private residence.

4. Portable equipment including, but not limited to rock crushers, asphalt plants, and concrete batching plants shall be exempted from the requirements of this regulation after an initial permit has been obtained, provided that:

   a. Each new location is reported to the Executive Secretary as early as possible, but in no case later than fourteen (14) days prior to ground breaking or initial equipment, erection, and

b. The equipment that was originally approved, shall be operated and maintained in a manner identical to that as specified in the initial construction permit.

5. Planned periodic modification of air contaminant sources shall be exempted from the requirements of this regulation, provided that:

   a. A prior permit has been obtained for all planned air contaminant sources, and

   b. Each modification be reported to the Executive Secretary as soon as possible, and

   c. The prior permit contains provisions for controlling emissions from all probable air contaminant sources that may be expected to come into existence as a result of the periodic modifications.

6. Other sources of minor significance specified by the Executive Secretary.

(51.9) Regulation S-IV INCINERATORS

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Jackson, Platte, and Greene Counties.

B. Definitions

The following definitions shall apply to this regulation:

1. Refuse - Garbage, rubbish, trade wastes, leaves, salvageable material, agricultrual wastes, or other wastes.

2. Incinerator - Any article, machine, equipment, contrivance, structure, or part of a structure used to dispose of refuse by burning wherein air contaminants resulting from combustion are passed into the ambient air through a stack or chimney from an enclosed chamber. For the purposes of this definition a chamber shall be regarded as enclosed, when during the time combustion takes place, only such apertures, ducts, stacks, flues or chimneys as are necessary to provide combustion air and to permit the escape of exhaust gases are open.

3. New incinerator - Any incinerator except for tepee burners, which is first put into operation on or after the effective date of this regulation or which on or after the effective date of this regulation is altered, reconstructed, rebuilt, or repaired at a cost of thirty percent (30%) or more of its replacement cost of installation, including, but not limited to, the cost of equipment, assembly, materials, and related labor.

4. New tepee burner - One not in existence as of the effective date of this regulation.

5. Multiple chamber incinerator - Any incinerator consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned, the refractories having a Pyrometric Cone Equivalent of 31, tested according to the method described in the American Society for Testing and Materials, Method C-24-56, or other method approved by the Executive Secretary of the Air Conservation Commission.

6. Ringelmann Chart - "Ringelmann's Scale for Grading the Density of Smoke" as published in U. S. Bureau of Mines Information Circular 8333.

7. Standard conditions - A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

C. General Provisions

1. This regulation shall apply to any incinerator used to dispose of refuse by burning to to process salvageable material by burning.

2. The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Executive Secretary in accordance with good engineering practice.

3. All new incinerators shall be multiple chamber incinerators, provided that the Executive Secretary may approve any other kind of incinerator if he finds in advance of construction or installation that such other kind of incinerator will comply with the requirements of Section D.

4. Each new incinerator will have affixed to it a plate inscribed with a set of instructions which clearly set forth in proper sequence the steps necessary to effect the satisfactory operation of the incinerator and the manufacturer's or designer's recommended burning rate in pounds of refuse per hour and the heat

input of the burners in BTU's per hour. The plate shall be conspicuously located so as to be readily visible to the incinerator operator.

5. Within thirty (30) days after the date on which construction of an incinerator is completed, the operator shall file a request with the Executive Secretary to schedule the performance tests provided in Section E of this regulation. If the results of the performance test indicate that the incinerator is not operating in compliance with Section D of this regulation, no person may cause or permit further operation of the incinerator, except for additional tests as outlined in Section E of this regulation, until approval is received from the Executive Secretary.

D. Restriction of Emissions from Incinerators

1. No person may cause or permit the emission of particulate matter from the chimney, stack or vent of any new incinerator in excess of the following:

    a. Incinerators with a refuse burning capacity of 200 or more pounds per hour: 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

    b. All other new incinerators: 0.3 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

2. No person may cause or permit the emission from any incinerator any air contaminant of a shade or density equal to or darker than that designated by the number on the Ringelmann Chart specified herein, or of such capacity as to obscure an observer's view to a degree equal to or greater than an emission designated by that number on the Ringelmann Chart as specified herein:

    a. New incinerators: Ringelmann Chart Number 1.

    b. New tepee burner: Ringelmann Chart Number 2 until January 1, 1973 and Ringelmann Chart No. 1 thereafter.

    c. All other incinerators: Ringelmann Chart Number 2, provided that for purposes of starting a fire or for charging any existing incinerator, except for tepee burners, a person may discharge for a period or periods aggregating not more than six (6) minutes in any sixty (60) consecutive minutes, air contaminants of a shade or density darker than No. 2 on the Ringelmann Chart, or of such opacity as to obscure an observer's view greater than an emission designated as No. 2 on the Ringelmann Chart.

d. All tepee burners for purposes of starting a fire may discharge for a period, not exceeding 30 minutes, air contaminants of shade or density darker than No. 2 on the Ringelmann Chart, or of such opacity as to obscure an observer's view greater than an emission designated as No. 2 on the Ringelmann Chart.

3. All new incinerators shall be designed and operated so that all gases, vapors and entrained effluents shall, while passing through the final combustion chamber, be maintained at a sufficient temperature to destroy all odor, provided, however, that the Executive Secretary may approve any other method of odor control which he finds to be equally effective.

E. Performance Testing

1. Refuse burned in conjunction with the performance tests specified in this regulation shall be a representative sample of the refuse normally generated by the operation which the incinerator is intended to serve.

2. The amount of particulate matter emitted from any incinerator shall be determined according to the American Society of Mechanical Engineers Power Test Codes - PTC - 27 dates 1957 and entitled "Determining Dust Concentration in A Gas Stream". This publication is hereby made a part of this regulation by reference. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executuve Secretary. In calculating the amount of particulate matter in stack gas, the loading shall be adjusted to twelve percent (12%) carbon dioxide in the stack gas. The carbon dioxide produced by burning of any liquid or gaseous fuel in the incinerator shall be excluded from the calculation to twelve percent (12%) carbon dioxide. Emissions shall be measured when the incinerator is operating at capacity or at any other burning rate during which emission of particulate matter is greater.

3. A performance test to determine compliance with the Ringelmann requirement specified in subsection D-3 of this regulation shall be performed on each new incinerator by the Executive Secretary or his designated representative.

4. The performance test specifed in subsection E-2 of this regulation may be required on any new incinerator and shall be required for each new incinerator having a burning capacity of 1,000 pounds per hour or greater. The initial performance test shall be performed at the expense of the vendor or operator subject to the approval of the Executive Secretary. The performance test may be observed by the Executive Secretary or his designated representative.

F. Exceptions

1. This regulation shall not apply to incinerators situated on residential premises and used exclusively to dispose of refuse originating on the same premises, provided that the total number of dwelling units on that premises does not exceed four.

2. This regulation shall not apply to incineration at cotton gins until December 31, 1971.

(50.1.1) Regulation S-V RESTRICTION OF EMISSION OF PARTICULATE MATTER FROM INDUSTRIAL PROCESSES

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte, and Greene Counties.

B. Definitions

The following definitions shall apply to this regulation:

1. ASME - American Society of Mechanical Engineer, 345 East 47th Street, New York, New York.

2. ASTM - American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania.

3. Existing - As applied to any equipment, machine, device, article, contrivance, or installation, shall mean in being, installed or under construction on February 24, 1971, except that if any equipment, machine, device, article, contrivance or installation is subsequently altered, repaired or rebuilt at a cost of 30 percent (30%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing or rebuilding existing equipment for the purpose of this definition.

4. New - As applied to any equipment, machine, device, article, or contrivance or installation, shall mean not "existing" as defined herein.

5. Particulate matter - Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

6. Refuse - Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes or other wastes.

7. Salvage operation - Any business, trade, industry other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material.

8. Source gas volume - The volume of gas arising from a process or other source operation.

9. Source operation - The last operation preceding the emission of an air contaminant, which operation (a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion fuel; and (b) is not principally an air pollution abatement operation.

10. Standard conditions - A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

C. General Provisions

1. This regulation applies to any operation, process, or activity except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials and except the burning of refuse and except the processing of salvageable material by burning.

2. Process weight means the total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion. Process weight rate means a rate established as follows:

   a. For continuous or long-run steady-state source operations the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

   b. For cyclical or batch source operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period. Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this section, that interpretation which results in the minimum value for allowable emission shall apply.

3. Emission tests relating to this regulation shall be made following the standards in American Society of Mechanical Engineers Powers Test Codes- PTC-27 dates 1957 and entitles "Determining Dust Concentration in A Gas Stream."

   Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary, Missouri Air Conservation Commission.

D. Emission Limitations

1. Except as provided for in Subsection D-2 and Section E of this Regulation, no person shall cause, suffer, allow, or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in Table 1 for the process weight allowcated to such source.

2. The limitations established by Subsection D-1 of this Regulation shall not require the reduction of particulate matter concentration, based on the source gas volume, below the concentration specified in Table 2 for such volume; provided that, for the purposes of this Subsection D-2 the person responsible for the emission may elect to substitute a volume determined according to the provisions of Section D-3 of this Regulation, and provided further that the burden of showing the source gas volume or other volume substituted therefor, including all the factors which determine such volume and the methods of determining and computing such volume, shall be on the person seeking to come within the provisions of this Regulation.

3. Any volume of gases passing through and leaving an air pollution abatement operation may be substitued for the source gas volume of the source operation served by such air pollution abatement operation for the purposes of Subsection D-2 of this Regulation provided such air pollution abatement operation emits no more than 40 percent of the weight of particulate matter entering thereto; and provided further that such substituted volume shall be corrected to standard conditions and to a moisture content no greater than that of any gas stream entering such air pollution abatement operation.

4. Notwithstanding the provisions of Subsections D-1 and D-2 of this Regulation, no person may cause, allow or permit the emission of particulate matter from any souce in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gas.

E. Exceptions

1. The provisions of Subsections D-1, D-2, D-3 and D-4 of this Regulation shall not apply to existing grey iron jobbing cupolas. For purposes of this Regulation, a jobbing cupola is defined as a cupola which has a single melting cycle operated no more than 10 hours in any consecutive 24 hours and no more than 50 hours in any consecutive 7 days.

    a. All existing grey iron jobbing cupolas shall be equipped with gas cleaning devices and so operated as to remove not less than 85% by weight of all the particulate matter in the cupola discharge gases, or release not more than 0.4 grain of particulate matter per standard cubic foot of discharge gas, whichever is more stringent.

    b. All gases, vapors, and gas entrained effluents from such cupolas shall be incinerated at a temperature not less than 1200° Fahrenheit for a period of not less than 0.3 seconds.

2. The provisions of this Regulation shall not apply to a process during periods when a new fire is being built, during the start-up of the operation, during an operational breakdown, or while air pollution control equipment is being cleaned or repaired.

3. This shall not apply to portable asphalt plants until after November 1, 1971.

F. Time Schedule for Compliance

Except as otherwise specified, complaince with the provisions of this regulation shall be according to the following time schedule:

1. All new installations shall comply when operation begins.

2. All existing installations not in compliance as of the effective date of this regulation shall be in compliance within six months of the effective date unless the owner or person responsible for the operation of the installation shall have submitted to the Executive Secretary in a form and manner satisfactory to him, a program and schedule for achieving compliance, such program and schedule to contain a date on or before which full compliance will be attained, and such other information as the Executive Secretary may require. If approved by the Executive Secretary, such date will be the date on which the person shall comply.

    The Executive Secretary may require persons submitting such program to submit subsequent periodic reports on progress in in achieving compliance.

TABLE I

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
Up to	Up to	Up to	16,000	8.00	16.5
			18,000	9.00	17.9
			20,000	10.	19.2
			30,000	15.	25.2
			40,000	20.	30.5
			50,000	25.	35.4
			60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E=4.10\ P^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$E=55.0\ P^{0.11}-40$, where E=rate of emission in lb/hr and P=process weight rate in tons/hr.

TABLE 2

Source Gas Volume, SCFM[a]	Concentration GR/SCF[b]	Source Gas Volume, SCFM[a]	Concentration GR/SCF[b]
7,000	0.100	140,000	0.038
or less		160,000	0.036
8,000	0.096	180,000	0.035
9,000	0.092		
		200,000	0.034
10,000	0.089	300,000	0.030
20,000	0.071	400,000	0.027
30,000	0.062		
		500,000	0.025
40,000	0.057	600,000	0.024
50,000	0.053	800,000	0.021
60,000	0.050		
		1,000,000	0.020
80,000	0.045	or more	
100,000	0.042		
120,000	0.040		

[a] Standard cubic foot per minute

[b] Grain per standard cubic foot

(51.5) Regulation S-VI MAXIMUM ALLOWABLE EMISSIONS OF PARTICULATE MATTER FROM FUEL BURNING EQUIPMENT USED FOR INDIRECT HEATING

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Charles, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Greene Counties.

B. Definitions

1. ASME - American Society of Mechanical Engineers, 345 East 47th Street, New York, New York.
2. ASTM - American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania.
3. Existing - As applied to any equipment, machine, device, article, contrivance, or installation, shall mean in being, installed or under construction on February 24, 1971, except that if any equipment, machine, device, article, contrivance or installation is subsequently altered, repaired or rebuilt at a cost of 30 percent (30%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing or rebuilding existing equipment for the purpose of this definition.
4. New - As applied to any equipment, machine, device, article, or contrivance or installation, shall mean not "existing" as defined herein.
5. Particulate Matter - Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.
6. Refuse - Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.
7. Residual fuel oil - Fuel oil variously known as Bunker C, PS 400 and Number 6 as defined in ASTM 396 487 (1959).
8. Standard Conditions - A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

C. General Provisions

1. This regulation applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, or air or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels include those such as coal, coke, lignite, coke breeze, gas, fuel oil, and wood, but do not include refuse. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

2. The heat content of coal shall be determined according to ASTM method D-271-64 "Laboratory Sampling and Analysis of Coal and Coke" or ASTM method D-2015-66 "Gross Caloric Value of Solid Fuel by the Adiabatic Bomb Calorimeter". The heat content of oil shall be determined according to ASTM method of D-240-64 "Heat of Combustion of Liquid Hydrocarbon by Bomb Calorimeter". The three publications cited in this subsection C-2 are hereby made part of this regulation by reference.

3. For purposes of this regulation, the heat shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel burning units at a plant or on a premise shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

4. The amount of particulate matter emitted shall be measured according to the American Society of Mechanical Engineers Power Test Codes—PTC-27 dated 1957 and entitled "Determining Dust Concentrations in A Gas Stream", which publication is made a part of this regulation by reference. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary, Missouri Air Conservation Commission.

5. Section D of this regulation shall apply only to existing sources.

6. Section E of this regulation shall apply to new sources.

D. Emission Limitations For Existing Installations

No person may cause, allow or permit the emission of particulate matter from existing installations in excess of that specified in the following schedule (see Graph I which is included for illustrative purposes only):

1. 0.60 pounds for each million BTU per hour input if the equipment has a capacity rating of 10 million or less. If the capacity rating of the fuel burning equipment is more than 10 million, the amount of particulate matter which may be emitted for each million BTU input shall decrease as the capacity rating of the fuel burning equipment increases, as follows:

    a. no more than 0.46 pounds for each million BTU input from equipment having a capacity rating of 50 million;

    b. no more than 0.40 pounds for each million BTU input from equipment having a capacity rating of 100 million;

    c. no more than 0.30 pound for each million BTU input from equipment having a capacity rating of 500 million;

    d. no more than 0.26 pounds for each million BTU input from equipment having a capacity rating of 1,000 million;

    e. no more than 0.23 pounds for each million BTU input from equipment having a capacity rating of 2,500 million;

    f. no more than 0.20 pounds for each million BTU input from equipment having a capacity rating of 5,000 million;

    g. no more than 0.19 pounds for each million BTU input from equipment having a capacity rating of 7,500 million:

    h. no more than 0.18 pounds for each million BTU input from equipment having a capacity rating of 10,000 million or more.

    The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating shall be determined either by linear interpolation, or by use of the following equation:

    $$\log Y = .23299 \log X + 1.4091 \text{ (where } 10<X<10{,}000\text{)}$$

    where X represents each BTU input per hour, and Y represents the maximum allowable pounds of emissions each million BTU per hour input.

E. Emission Limitations For New Installations

After the effective date of this regulation, no person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule (see Graph I which is included for illustrative purposes only):

1. 0.60 pounds for each million BTU per hour input if the equipment has a capacity rating of 10 million or less. If the capacity rating of the fuel burning equipment is more than 10 million,

the amount of particulate matter which may be emitted for each million BTU input shall decrease as the capacity rating of the fuel burning equipment increases, as follows:

a. no more than .348 pounds for each million BTU input from equipment having a capacity rating of 50 million;

b. no more than .275 pounds for each million BTU input from equipment having a capacity rating of 100 million;

c. no more than .159 pounds for each million BTU input from equipment having a capacity rating of 500 million;

d. no more than .126 pounds for each million BTU input from equipment having a capacity rating of 1,000 million;

e. no more than .100 pounds for each million BTU input from equipment having a capacity rating of 2,000 million or more.

The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating shall be determined either by linear interpolation, or by use of the following equation:

$$\log Y = .3382 \log X + 2.1454, \ (\text{where } 10<X<2000).$$

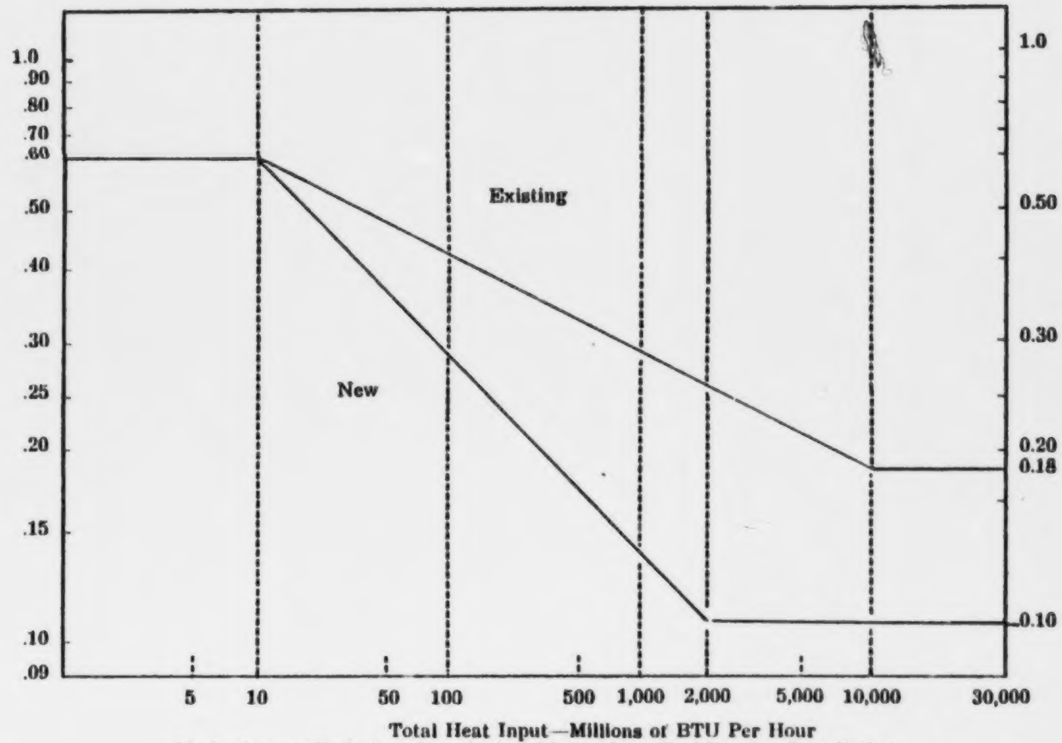
where X represents each million BTU input, and Y represents the allowable pounds of emissions.

F. Compliance with the provisions of this regulation shall not be determined during periods when a new fire is being built, during start-up, change of load, fuel or other operating conditions, during an operational breakdown or other emergency conditions, while air pollution control equipment is being cleaned or repaired, or during soot-blowing, but shall be determined during steady-state conditions.

G. Compliance schedule for existing sources—existing fuel burning equipment used for indirect heating shall be modified or rebuilt in compliance with section D in accordance with the following schedule:

Rated Capacity	Latest Date for Compliance
10,000 million BTU heat input per hour	January 1, 1972
10 million to 9,999 million BTU heat input per hour	January 1, 1973
Less than 10 million BTU heat input per hour	January 1, 1975

MAXIMUM ALLOWABLE PARTICULATE EMISSION
POUNDS PARTICULATE PER MILLION BTU HEAT INPUT



Limitations on Emission of particulate Matter from Fuel Burning Installations
GRAPH I

(50.1) Regulation S-VII RESTRICTION OF PARTICULATE MATTER FROM BECOMING AIRBORNE

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte, and Green Counties.

B. Purpose

This Regulation S-VII is to be used to prevent or restrict the emission of particulate matter in any form except as would be applied in Regulations S-V and S-VI, when such emissions are entrained in a gas stream being emitted from a stack.

C. Definitions

1. Particulate matter - Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

2. Standard Conditions - A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

D. Visual Limitations for Particulate Matter Becoming Airborne

1. No person may cause or permit the handling or transporting or storage of any material in a manner which allows or may allow particulate matter, to become airborne in such quantities and concentrations that it remains visible in the ambient air beyond the premises where it orginates or that its presence may be found beyond the premises where it originates, and that it has particulate matter shown to be larger than forty (40) microns in size. The size of the particulate matter shall be determined by microscopy or any other technique approved by the Executive Secretary and proven to be equally accurate.

2. No person may cause or permit a building or its appurtenances, or a road, or a driveway, or an open area to be constructed, used, repaired or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne so that it remains visible beyond the premises where it originates or that its presence may be found beyond the premises where it originates. The Executive Secretary, Missouri Air Conservation Commission, may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne including but not limited to paving or frequent cleaning of roads, driveways, and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover. This subsection (D-2) shall not apply to agricultural operations within a field including tilling,

planting, cultivating, or harvesting, the moving of livestock on foot, or the hauling of produce within the confines of a farm.

E. Property-line Standard Limitations for Particulate Matter Becoming Airborne

No person shall cause, suffer, or permit the emission of any particulate matter so as to cause concentrations or particulate matter at any inhabited place to exceed any one of the following:

1.	Suspended Particulates	80 micrograms/m^3	6-month geometric mean
	(High-volume Sampler)	200 micrograms/m^3	2-hour arithmetic average for not less than five two-hour sampling periods within any one year. No more than 3 samples shall be taken during any 24-hour period.
2.	Soiling Index	0.4 Coh/1000 lineal feet	6-month geometric mean
	(AISI Paper Tape sampler)	1.0 Coh/1000 lineal feet	8-hour arithmetic average

(50.1.2) Regulation S-VIII RESTRICTION OF EMISSION OF VISIBLE AIR CONTAMINANTS

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Greene Counties.

B. Definitions

The following definitions shall apply to this regulation:

1. Existing - As applied to any equipment, machine, device, article, contrivance, or installation, shall mean in being, installed, or under construction on February 24, 1971, except that if any equipment, machine, device, article, contrivance or installation is subsequently altered, repaired or rebuilt at a cost of 30 percent (30%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing or rebuilding existing equipment for the purpose of this definition.

2. Incinerator - Any article, machine, equipment, contrivance, structure, or part of a structure used to burn refuse or to process refuse material by burning other than by open burning as defined herein.

3. New - As applied to any equipment, machine, device, article, or contrivance or installation, shall mean not "existing" as defined herein.

4. Ringelmann Chart - "Ringelmann's Scale for Grading the Density of Smoke" as published in the U.S. Bureau of Mines Information Circular 8333.

5. Refuse - Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.

C. Restrictions Applicable to Existing Installations

No person may discharge into the ambient air from any single existing source of emission whatsoever any air contaminant a) of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke designated as No. 2 on the Ringelmann Chart.

D. Restrictions Applicable to New Installations

No person may discharge into the ambient air from any single new source of emission whatsoever, any air contaminant a) of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree not equal to or greater than does smoke designated as No. 1 on the Ringelmann Chart.

E. Exceptions

1. A person may discharge into the ambient air from any source of emission for a period or periods aggregating not more than six minutes in any sixty minutes air contaminants a) of a shade or density not equal to nor darker than No. 3 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree not equal to nor greater than does smoke designated as No. 3 on the Ringelmann Chart.

   For the purpose of this Subsection E (1) the Executive Secretary may for a specific source and for special conditions approve any other schedule.

2. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Section C or D of this Regulation S-VIII, such sections shall not apply.

3. The provisions of Section C of this Regulations S-VIII shall not apply to the following:

   a. Transfer of molten metals.

   b. Emissions from transfer ladles.

   c. Existing grey iron cupola furnaces.

4. This Regulation S-VIII shall not apply to the following:

   a. Internal combustion engines.

   b. Wood burning stoves or fireplaces in dwellings.

   c. Fires used for recreational purposes or fires used for the non-commercial preparation of food by barbecuing.

   d. Fires used solely for the purpose of training firemen.

   e. Smoke generators used for training air pollution control inspectors.

f. Incinerators used to burn refuse.

g. The pyrolysis of wood for the production of charcoal in a Missouri type charcoal kiln.

h. Open burning of refuse.

i. During emergency conditions, provided the Executive Secretary is notified.

F. Method of Measurement

The Ringelmann Chart shall be the standard in grading the shade or opacity of visible air contaminant emissions. The Executive Secretary may with the consent of the source operator employ any other means of measurement which gives comparable results or results of greater accuracy.

G. Time Schedule For Compliance

Except as otherwise specified, compliance with the provisions of this regulation shall be according to the following time schedule:

1. All new installations shall comply when operation begins.

2. All existing installations not in compliance as of the effective date of this regulation shall be in compliance within six months of the effective date unless the owner or person responsible for the operation of the installation shall have submitted to the Executive Secretary in a form and manner satisfactory to him, a program and schedule to contain a date on or before which full compliance will be attained, and such other information as the Executive Secretary may require. If approved by the Executive Secretary, such date will be the date on which the person shall comply.

   The Executive Secretary may require persons submitting such program to submit periodic subsequent reports on progress in achieving compliance.

(50.6) Regulation S-IX RESTRICTION OF EMISSION OF ODORS

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis and St. Charles, St. Louis, Jefferson, Clay, Cass, Buchanan, Franklin, Ray, Jackson, Platte, and Greene Counties.

B. Restriction of Emission of Odors

No person may cause, permit or allow the emission of odorous matter in such concentrations and frequencies or for such durations that such odor can be perceived when one (1) volume of odorous air is diluted with seven (7) volumes of odor-free air for two (2) separate trials not less than 15 minutes apart within the period of one (1) hour.

C. Exceptions

The provisions of Section B of this Regulation IX shall not apply to the emission of odorous matter from the pyrolysis of wood in the production of charcoal in a Missouri type charcoal kiln.

D. Method of Measurement

Measurements may be made with s Scentometer as manufactured by the Barnebey-Cheney Company or by a similar technique that will give equivalent results, as agreed to at the time by the source operator and the Executive Secretary.

(50.2) Regulation S-X RESTRICTION OF EMISSION OF SULFUR COMPOUNDS

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Greene Counties.

B. Definitions

The following definitions shall apply to this regulation:

1. ASME - American Society of Mechanical Engineers, 345 East 47th Street, New York, New York.

2. ASTM - American Society of Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania.

3. Existing - As applied to any equipment, machine, device, article, contrivance or installation, shall mean in being, installed, or under construction on February 24, 1971, except that it any equipment, machine, device, article, contrivance or installation is subsequently altered, repaired or rebuilt at a cost of 30 percent (30%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing or rebuilding existing equipment for the purpose of this definition.

4. New - As applied to any equipment, machine, device, article, or contrivance or installation, shall mean not "existing" as defined herein.

5. Particulate matter - Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

6. Residual fuel oil - Fuel oil variously known as Bunker C, PS 400 and Number 6 as defined in ASTM D 396 487 (1959).

7. Source operation - The last operation preceding the emission of an air contaminant, which operation a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion fuel, and b) is not solely an air pollution abatement operation.

8. Standard conditions - A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

C. General Provisions

1. Section D of this regulation shall apply to all emissions except those in which both

   a. fuel is burned primarily to produce heat, and

   b. the sulfur compound emission is due primarily to the sulfur in the fuel burned.

2. Sections E and F shall apply to all emissions from any source or sources whatsoever.

3. The method of measuring sulfur trioxide and sulfuric acid or any combination thereof in stack gases shall be:

   Particulates (H_2SO_4—Acid Mists)

   "Atmospheric Emissions from Sulfuric Acid Manufacturing Processes"
   Ref. Public Health Service Publication 999-AP-13 (1965)
   Appexdix B, Pages 61-6 (Modified Monsanto Co., Method)[a]

   Gaseous (SO_3—SO_2)

   "Atmospheric Emissions from Sulfuric Acid Manufacturing Processes"
   Ref. Public Health Publication 999-AP-13 (1965)
   Appendix B, Page 85-7 (Shall Development Co. Method)[b]

4. The method of measuring hydrogen sulfide in the ambient atmosphere shall be:

   Lead-Acetate-Impregnated Filter Paper Procedure
   Ref. Sensenbaugh, J.D. and Hemeon, W. C. L: A Low Cost Sampler for Measurement of Low Concentration of Hydrogen Sulfide. Air Repair 4:5 (May 1954)

5. The method of measuring sulfur dioxide in stack gases shall be:

   Gaseous (SO_3—SO_2)
   "Atmospheric Emissions from Sulfuric Acid Manufacturing Processes"
   Ref. Public Health Service Publication 999-AP-13 (1965)
   Appendix B, Page 85-7 (Shell Development Co. Method)

[a] Secondary reference for industrial emission sampling and analysis for particulates (sulfuric acid—acid mists) W. F. Patton, J.A. Brink "New Equipment and Techniques for Sampling Chemical Process Cases". J. Air Pollution Control Association 13, 162-66 (Apirl 1963).

[b] Secondary reference for industrial emission sampling and analysis for gases (sulfur trioxide and sulfur dioxide) "Determination of Sulfur Dioxide and Sulfur Trioxide in Stack Gases," Emeryville Method Ser. 4S16/59a. Anal. Dept. Shell Development Co., Emeryville, California (1959).

6. The method of measuring sulfur trioxide and sulfuric acid or any combination thereof suspended in the ambient atmosphere shall be:

   Particulate (H_2SO_4)
   Ref. B.T. Commins, "Determination of Particulate Acid in Town Air," Analyst, 88, 364-67 (May 1963)

7. The method of measuring sulfur dioxide in the ambient atmosphere shall be:

   Gaseous (SO_2) colorimetric
   Ref. "Selected Methods for the Measurement of Air Pollutants," Public Health Service Publication No. 999-AP-11 (May 1965)
   "Determination of Sulfur Dioxide: West Gaeke Method" Page A1-5
   Gaseous (SO_2) conductimetric
   Ref. "ASTM Standards on Methods of Atmospheric Sampling and Analysis"
   2nd edition, Method D 1355-60, Method A, Page 11

8. Other test methods approved by the Executive Secretary may be used. The publications describing methods of measurement specified in this Section are hereby made a part of this regulation by reference.

D. Concentration of Sulfur Compounds in Emission Restricted

1. No person shall cause or permit the emission into the atmosphere from any existing source specified in subsection C (1) of this regulation, gases containing more than 2,000 parts per million by volume of sulfur dioxide or 500 parts per million by volume of sulfur dioxide from any new source.

2. No person shall cause or permit the emission into the atmosphere from any source specified in subsection C (1) of this regulation, gases containing more than 70 milligrams per cubic meter of sulfuric acid or sulfur trioxide or any combination thereof or 35 milligrams per cubic meter of sulfuric acid, sulfur trioxide or any combination thereof from any new source (expressed as sulfuric acid).

3. Existing sources shall be modified or rebuilt in compliance with Section D of this Regulation S-X within nine (9) months of the effective date of this regulation.

E. Emission of Sulfur Compounds in Certain Amounts and Manner Restricted

1. No person may cause or permit the emission of sulfur dioxide from any source in excess of one thousand (1000) pounds per hour except when such emissions do not cause or contribute to concentrations and frequencies exceeding those specified in the following table in the ambient air at any occupied place beyond the premises on which the source is located:

Concentration[a]	Averaging Time	Maximum allowable frequency
.25 ppm or more	1 hour	Once in any 4 days at any sampling site
.07 ppm or more	24 hours	Once in any 90 days at any sampling site

2. If the concentrations and frequencies specified in subsection E (1) of this Regulation X are exceeded, the person responsible for each source which causes or contributes to such concentrations and frequencies and which emits more than one thousand (1,000) pounds per hour of sulfur dioxide shall file an emission reduction plan with the Executive Secretary for approval. Such a plan shall include a description of proposed process modifications, change in fuel use, control equipment to be installed, or any other methods which aid in the reduction of the concentrations and frequencies in the ambient air specified in subsection E (1). The approval and implementation of such a plan shall constitute compliance with this Regulation X.

3. No person shall cause or permit the emission of sulfuric acid or sulfur trioxide or any combination thereof from any premises in such manner and amounts that the concentrations and frequencies attributable to such emission exceed those shown in the following table in the ambient air at any place where people live, work, or congregate beyond the premises on which the source is located.

* Concentration of sulfuric acid or sulfur trioxide or any combination thereof	Averaging Time	Maximum allowable frequency
0.03 mg/m^3 or more	30 minutes or more	Once in any 48 hours
0.01 mg/m^3 or more	24 hours	Once in any 90 days

*Milligrams per cubic meter at standard conditions, measured and calculated as sulfuric acid.

4. No person shall cause or permit the emission of hydrogen sulfide from any premises in such manner and amounts that the concentrations attributable to such emissions in the ambient air at any occupied place beyond the premises on which the source is located exceed a concentration of 0.03 parts per million by volume for any averaging period of 30 or more minutes on more than two occasions in any 5 consecutive day period, or 0.05 parts per million by volume for any averaging period 30 or more minutes more than two times per year.

[a] parts per million by volume

F. More Restrictive Limitation to Apply

In any situation the limitations imposed by the provisions of both Sections D and E of this Regulation S-X shall be assessed, and the more restrictive section shall apply.

(8.0) Regulation S-XI RULES FOR CONTROLLING EMISSIONS DURING PERIODS OF HIGH AIR POLLUTION POTENTIAL

A. General Provisions

1. This regulation shall apply to all emissions from any source or any premises

2. It may apply to all or part of the affected area depending upon which pollutant fulfills the requirements of subsection B. 2., below, and whether or not air sampling reveals only a localized problem.

B. Air Pollution Alerts and Emergencies

1. Alert and emergency level values are stated as:

   a. The product of the hourly sulfur dioxide concentration in parts per million, and the hourly particulate concentration in COH per 1,000 linear feet, or

   b. the concentrations of SO_2, CO, photochemical oxidants particulates in COHs, or NO_2.

   The basis of reference for the State of Missouri data shall be: Sulfur dioxide as measured by the continuous modified West-Gaeke method or any other method standardized against such; particulates as measured by the automatic paper-tape sampler method, "ASTM Standard Method of Test for Particulate Matter in the Atmosphere, Optical Density of Filter Deposit, D-1704-61"; carbon monoxide as measured by the infrared spectophotometer method, MSA Bulletin No. 0705-10, Instrument Division, Pittsburgh, Pennsylvania; photochemical oxidants as measured by "Analytical Methods of the 'Intersociety Committee on Methods for Ambient Air Sampling and Analyses', Health Laboratory Science, 1970."

2. Alert Values:

   a. Yellow Alert value - Any one of the following shall initiate the Yellow Alert:

      1. Product reaching 0.2 ppm at any sampling station (24 hour average).

      2. Sulfur dioxide concentration reaching 0.30 ppm at any sampling station (24 hour average).

      3. Photochemical oxidant concentration reaching 0.10 ppm at any sampling station (1 hour average).

4. Carbon monoxide concentration reaching 15 ppm at any sampling station (8 hour average).

5. Particulate concentration reaching 3 COHs (375 ug/m^3) at any sampling station (24 hour average).

6. NO_2 concentration reaching 0.6 ppm at any sampling station (1 hour average) 0.15 ppm (24 hour average).

b. Red Alert value - Any one of the following shall initiate the Red Alert:

1. Product reaching 0.8 ppm at any sampling station (24 hour average).

2. Sulfur dioxide concentration reaching 0.6 ppm at any sampling station (24 hour average).

3. Photochemical oxidant concentration reaching 0.4 ppm at any sampling station (1 hour average).

4. Carbon monoxide concentration reaching 30 ppm any any sampling station (8 hour average).

5. Particulate concentration reaching 5 COHs (625 ug/m^3) at any sampling station (24 hour average).

6. NO_2 concentration reaching 1.2 ppm at any sampling station (1 hour average) 0.3 ppm (24 hour average).

c. Emergency Alert value - Any one of the following shall initiate an Emergency Alert:

1. Product reaching 1.2 ppm at any sampling station (24 hour average).

2. Sulfur dioxide concentration reaching 0.8 ppm at any sampling station (24 hour average).

3. Photochemical oxidant concentration reaching 0.6 ppm at any sampling station (1 hour average).

4. Carbon monoxide concentration reaching 40 ppm at any sampling station (8 hour average).

5. Particulate concentration reaching 7 COHs (875 ug/m^3) at any sampling station (24 hour average).

6. NO_2 concentration reaching 1.6 ppm at any sampling station (1 hour average) 0.4 ppm (24 hour average).

C. Air Pollution Watch

1. Air Pollution Watch procedures shall be initiated by the Executive Secretary upon receipt of a 36 hour high air stagnation advisory from the appropriate federal weather forecasting official for an area including all or part of the affected area.

2. The following Watch procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Watch condition exist.

   b. Notify all affected governmental control agencies sampling Watch conditions exist, and the coordination of action is required.

   c. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 2 hours, with continual hourly review, at a central control location.

   d. Inform the general public through the news media that a high air pollution potential exists, the area or areas where high initial readings have been obtained from sampling, and encourage persons suffering from respiratory ailments or heart conditions to take whatever precautions are most appropriate.

   e. Backyard incineration, including the open burning of leaves, tree trimmings, garbage, and other refuse shall be prohibited throughout the entire affected area.

   f. All variances or permits allowing open burning shall be temporarily rendered invalid for the duration of the high air pollution potential.

   g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary shall be notifed that Watch conditions exist. All such industries shall be requested to volunarily begin actions to reduce emissions of air contaminants from their operations, consistent with the provisions of their Yellow Alert plans. See Table I.

   h. The Executive Secretary may request through the news media that the use of automobiles be restricted to necessary driving only.

D. Yellow Alert

1. Yellow Alert procedures shall be initiated by the Executive Secretary if the following conditions are met:

    a. An air stagnation advisory and the Yellow Alert values are equalled or exceeded at any one sampling station within the advisory area, unless there is a current forecast of meteorological improvement within the next 24 hours.

    b. Meteorological conditions are such that the pollutant concentrations can be expected to remain at the above levels for 12 or more hours or increase unless control actions are taken.

2. The following Yellow Alert procedures shall apply:

    a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Yellow Alert conditions exist.

    b. Notify all affected governmental control agencies that Yellow Alert conditions exist, and that coordination of action is required.

    c. Notify all hospitals within the affected area that Yellow Alert conditions exist.

    d. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour, with continual hourly review at a central control location.

    e. Inform the general public through the news media that a Yellow Alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

    f. The Executive Secretary shall request very emphatically through the news media that all unnecessary use of automobiles be restricted, and that all entertainment functions and facilities be closed.

    g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Yellow Alert conditions shall initiate such plans upon notification by the Executive Secretary. See Table I.

h. No open burning will be allowed anywhere within the affected area.

E. Red Alert

1. Red Alert procedures shall be initiated by the Executive Secretary if the following requirements are met:

   a. A 36 or 24-hour high air stagnation advisory is in effect for all or part of the affected area.

   b. The Red Alert values equalled or exceeded at any one monitoring station within the area.

The Red Alert can also be initiated if:

   a. The Red Alert value is equalled or exceeded as the arithmetic mean for 12 consecutive hours, and an ASA forecasts stagnation for the following 12 hours, or

   b. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 24 consecutive hours and a forecast of stagnation for the following 12 hours is received.

2. The following Red Alert procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Red Alert conditions exist.

   b. Notify all affected governmental control agencies that Red Alert conditions exist and that coordination of action is required.

   c. Notify all hospitals within the affected area that Red Alert conditions exist.

   d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour with continual hourly review at a central control location.

   e. Inform the general public through the news media that a Red Alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

f. Airlines operating within the Red Alert area shall be notified that such conditions exist, and that a reduction of flights out of the airport may be required.

g. Non-local vehicular traffic may be diverted around the Red Alert area depending upon which pollutant or pollutants caused the alert.

h. Local vehicular traffic shall through the news media be told to avoid certain areas, and emphatically told to restrict non-essential trips.

i. All incineration and open burning shall cease, regardless of location.

j. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Red Alert conditions shall initiate such plans upon notification by the Executive Secretary. See Table II.

F. Air Pollution Emergency

1. Emergency procedures shall be initiated by the Executive Secretary, if the following requirements are met:

   a. A 36 or 24-hour high air stagnation advisory is in effect for all or part of the affected area.

   b. The air pollution emergency values are equalled or exceeded as the arithmetic mean of 4 consecutive hours at any one monitoring station.

The Air Pollution Emergency procedures can also be initiated if:

   a. The air pollution emergency value is equalled or exceeded as the arithmetic mean of 12 consecutive hours and a forecast of stagnation for the following 12 hours is received, or

   b. The Red Alert is equalled or exceeded as the arithmetic mean for 24 hours and a forecast of stagnation for the following 12 hours is received, or

   c. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 36 hours and a forecast of stagnation for the following 12 hours is received.

2. The following Emergency Procedures shall apply:

a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that an emergency exists.

b. Notify all affected governmental control agencies that an emergency exists, and that coordination of action is required.

c. Notify all hospitals within the affected area that an emergency exists, and to be so prepared.

d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1/2 hour with continual half-hour review at a central control location.

e. Open burning and incineration shall cease throughout the area.

f. Facilities which are sources of air contaminant emissions and are required to have filed approved plans with the Executive Secretary shall initiate such plans upon notification by the Executive Secretary or his representative that Air Pollution Emergency conditions exist. See Table III.

g. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

h. All manufacturing facilities except those listed in F. 2. f. shall institute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations to the extent possible without causing injury to persons or damage to equipment.

i. All airplane flights originating within the area of the Air Pollution Emergency shall be cancelled.

j. All places of employment described below shall immediately cease operation during the Air Pollution Emergency:

   Mining and Quarrying
   Contract Construction Work
   Wholesale Trade Establishments
   Schools and Libraries

Governmental Agencies except those needed to administer Air Pollution Alert Program and other essential Agencies determined by the Executive Secretary to be vital for public safety and welfare and needed to administer the provisions of these regulations.

Retail trade stores except those dealing primarily in sale of food or pharmacies.

Banks, real estate agencies, insurance offices and similar businesses.

Laundries, cleaners and dryers, beauty and barber shops and photographic studios.

Amusement and recreational service establishments such as motion picture theaters.

Automobile repair and automobile service garages.

Advertising offices, consumer credit reporting, adjustment and collection agencies, printing and duplicating services, rental agencies and commercial testing laboratories.

G. It should be made clear that an air pollution watch, yellow alert, red alert and emergency can be declared on the basis of deteriorating air quality alone; an air stanation advisory need not be in effect. The appropriate episode status should be declared by the Executive Secretary when any monitoring site records ambient air quality below that designated in the criteria.

The levels used to designate an air pollution emergency are those that pose an imminent and substantial endangerment to public health. Because these levels should not be permitted to occur, an air stagnation advisory should be declared when it appears that these levels may be reached.

H. Termination of Alerts

When in the judgement of the Executive Secretary meteorological conditions and pollutant concentrations are such to warrant discontinuance of any alert condition, he shall notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that the alert has been discontinued, and issue a public notice to that effect.

TABLE I

YELLOW ALERT PLAN OBJECTIVES

	Air Contaminant Source		Requirements for Plan
1.	Electric Power Generating Facilities	1a.	Reduction of emission by utilization of fuels having low ash and sulfur content.
		b.	Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 PM.M to 4:00 P.M.)
		c.	Reduction of emissions by diverting electric power generation to facilities outside of area for which the alert is called.
2.	Process Steam Generating Facilities	2a.	Reduction of emissions by utilization of fuels having low ash and sulfur content.
		b.	Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.)
		c.	Reduction of steam load demands consistent with continuing the operation of the plant.
3.	Manufacturing industries of the following (SIC) group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29	3a.	Reduction of air contaminant emissions by curtailing, postponing, or deferring production and allied operations.
		b.	Stop all trade waste disposal production which emit particles, gases, vapors or malodorous substances including incineration.
		c.	Reduction of heat load demands for processing to a minimum.

	Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries -Group 20		
4.	Other manufacturing facilities required to submit alert plans by the Executive Secretary.	4a.	Reduction of air contaminant emissions by curtailing or deferring production and allied operations.
		b.	Stop all trade waste disposal practices which emit particles, gases, vapors or malodorous substances including incineration.
		c.	Reduction of heat load demands for processing to a minimum.
5.	Private, public and commercial refuse disposal operations.	5a.	Stop all open burning including disposal of diseased trees and burning at fire fighting schools, except as required for disposal of hazardous materials or other emergency needs.
		b.	Operation of incinerators shall be limited to the hours between 10:00 A.M. and 2:00 P.M.
6.	Transportation	6a.	The unnecessary operation of any motor vehicle should be restricted.

TABLE II

RED ALERT PLAN OBJECTIVES

All Yellow ert plans shall be continued. In addition, the following steps shall be taken:

	Air Contaminant Source		Requirements for Plan
1.	Process steam generating facilities	1a.	Maximum reduction of air contaminant emissions by utilization of fuels having

	the lowest ash and sulfur content.
	b. Maximum utilization of periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.) for soot blowing and boiler lancing.
	c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
2. Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemical and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries-Group 20	2a. Maximum reduction of air contaminant emission by, if necessary, postponing production and allied operations b. Maximum reduction of heat load demands for processing. c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a. Maximum reduction of air contaminant emissions by, if necessary, postponing production and allied operations.
4. Private, public and commercial refuse disposal operations.	4a. Stop operation of all incinerators.
5. Transportation	5a. Car pools and public transportation must be used in place of unnecessary motor vehicle operation.

TABLE III

AIR POLLUTION EMERGENCY PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan

All Yellow and Red Alert plans shall be continued. In addition, the following steps shall be taken:

1.	Process steam generating facilities	1a.	Maximum reduction of air contaminant emissions by reducing heat and steam load demands to values consistent with preventing equipment damage.
		b.	Maximum utilization periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.) for soot blowing and boiler lancing.
2.	Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, and Clay and Concrete Product Industries-Group 32 Primary Metal Industries-Group 33 Grain Industries-Group 23	2a.	Elimination of air contaminant emission from the manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
3.	Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a.	Elimination of air contaminant emissions from the manufacturing operations by ceasing, curtailing postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
		b.	Maximum reduction of heat load demands for processing.
4.	Private, public and commercial operations.	4a.	The following places of employment, if notified by the Executive Secretary, shall immediately cease operations:

	1. Mining and quarrying operations. 2. Construction projects except as required to avoid emergent physical harm. 3. Manufacturing establishments except those required to have in force an air pollution alert plan. 4. Wholesale trade establishments. 5. Governmental units, except as required to implement the provisions of these regulations and other operations essential to immediate protection of the public welfare and safety. 6. Retail trade and service establishments except pharmacies, food stores and other similar operations providing for emergency needs. 7. Other commercial service operations such as those engaged in banking, insurance real estate, advertising, etc. 8. Educational institutions. 9. Amusement and recreational facilities.
5. Transportation	5a. Motor vehicles shall only be used for private and public emergency needs.

(14.0) Regulation S-XII PUBLIC AVAILABILITY OF EMISSION DATA

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Greene Counties.

B. General

Emission data obtained from owners or operators of emission sources will be correlated with applicable emission limitations and other control measures, and will be made available to the public upon request.

(13.0) Regulation S-XIII SUBMISSION OF EMISSION INFORMATION

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Charles, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Green Counties.

B. General Provisions

1. The owner or operator of any source shall, upon notification from the Executive Secretary, maintain records of the nature and amounts of emissions from such source and/or any other information as may be deemed necessary by the Executive Secretary to determine whether such source is in compliance with applicable emission limitations or other control measures.

2. The information recorded shall be reported to the Executive Secretary on a semiannual basis commencing with the first full semiannual period after the Executive Secretary's notification to such owner or operator of the record-keeping requirements. The semiannual periods are January 1 to June 30 and July 1 to December 31, except that the initial reporting period shall commence on the date the Executive Secretary issues notification of the record-keeping requirements.

3. The records required by this regulation shall be completed on forms furnished by or satisfactory to the Executive Secretary, and shall be submitted within 45 days after the end of each reporting period.

4. All information collected or recorded in accordance with the provisions of this regulation shall be retained by the owner or operator for two (2) years after the date on which the pertinent report is submitted.

(51.13) Regulation S-III OPEN BURNING RESTRICTIONS

A. Application

This regulation shall apply throughout the State of Missouri except in the City of St. Louis, and St. Chares, St. Louis, Jefferson, Franklin, Clay, Cass, Buchanan, Ray, Jackson, Platte and Green Counties.

B. Definitions

1. Open burning - Combustion of any matter, except in a closed chamber. For the purpose of this definition, a chamber shall be regarded as closed when provided, during the time combustion takes place, with only such apertures, ducts, stacks, flues or chimneys as are necessary to provide combustion air and to permit the escape of exhaust gases.

2. Refuse - Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.

3. Trade waste - Solid, liquid, or gaseous refuse resulting from construction or the conduct of any business, trade, or industry, or from any demolition operation including, but not limited to, plastics, cardboard cartons, grease, oil, chemicals, and cinders.

4. Salvage operation - Any business, trade, industry, or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material.

C. Prohibition of Salvage Operations by Open Burning

On and after 180 days from the effecitve date of this regulation, no person may conduct, cause, permit or allow, a salvage operation by open burning.

D. Refuse Burning Restrictions

On and after one year from the effective date of this regulation, no person may conduct, cause, permit or allow, open burning of refuse.

E. Restrictions on Open Burning of Trade Wastes

On and after 180 days from the effective date of this regulation, no person may conduct, cause, permit or allow, the disposal of trade wastes by open burning.

F. Exceptions

1. The open burning of trade wastes may be permitted only when it can be shown that an emergency exists which requires open burning or when it can be shown that such open burning is the only feasible method of disposal. Any person intending to engage in open burning of trade wastes shall file a request to do so with the Executive Secretary of the Air Conservation Commission. The application shall state the following:

    a. The name, address, and telephone number of the person submitting the application.

    b. The type of business or activity involved.

    c. A description of the proposed equipment and operating practices, the type, quantity, and composition of trade wastes to be burned, and expected composition and amount of air contaminants to be released to the atmosphere where known.

    d. The schedule of burning operations.

    e. The exact location where open burning will be used to dispose of the trade waste.

    f. Reasons why an emergency exists or no method other than open burning is feasible,

    g. Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction. Upon approval of the application by the Executive Secretary, the person may proceed with the operation without being in violation of Section D or E of this regulation, but such approval shall not exempt the applicant from the provisions of any other law, ordinance or regulation.

2. This regulation shall not apply to the following:

    a. Burning of refuse on a residential premises having not more than four dwelling units, provided that the refuse originates on the same premises.

b. Burning of refuse at a dump or other solid waste disposal area owned or operated by a city, or operated under license, permit or contract to a city, for a period of two years from the effective date of this regulation for cities having a population in the range between 2,000 and 10,000 inhabitants, and for a period of three years from the effective date of this regulation for cities having a population of less than 2,000 inhabitants, provided such burning takes place at a distance greater than one-fourth mile from the nearest inhabited dwelling.

c. Open burning of tree trunks, tree limbs, vegetation, or untreated waste lumber when such burning takes place at the site of a sanitary landfill licensed under the provisions of Section 64.670, RSMo or at any other site approved by the Executive Secretary

d. Waste materials resulting from wood processing facilities in existence as of the effective date of this regulation and which do not relocate to a new site, and producing less than 8,000 board feet or equivalent per day, may be open burned if a least 200 yards from the nearest dwelling. Waste materials resulting from wood processing plants which relocate or form new wood processing facilities not in existence as of the effective date of this regulation, and producing less than 8,000 board feet, or equivalent per day, may be open burned if at least one (1) mile outside the city limits of any incorporated area or municipality, and at least 200 yards from the nearest dwelling.

e. Open burning of tree trunks, tree limbs, and vegetation from land clearing operations when such burning takes place at a distance equal to or greater than 200 yards from the nearest inhabited dwelling.

f. Open burning of trade wastes in cotton gins until December 31, 1971.

g. Fires set in connection with agricultural or forestry operations related to the growing or harvesting of crops.

h. Fires set for the purpose of instructing and training firemen in the methods of fighting fires.

i. Camp fires and other fires used solely for recreational purposes, for ceremonial occasions, or for outdoor non-commercial preparation of food.

3. Nothing in this section may be construed to permit open burning which causes or constitutes a hazard to vehicular or air traffic nor which violates any other regulations.

CITY OF INDEPENDENCE
AIR POLLUTION REGULATIONS

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF INDEPENDENCE, MISSOURI, AS FOLLOWS:

Section 1. That Sections 11.29 and 11.73, Article 3, Chapter 11, be and the same are hereby repealed that further Sections 9.20 and 9.23, Article 3, Chapter 9, of the code of the City of Independence, Missouri, be and the same are hereby repealed and that in lieu thereof, the re-enacted and new code article the same being designated Article 14, of Chapter 11 the new code Article, contains Sections 11.150 through and inclusive of 11.167 in the form as hereto attached and incorporated herein as though fully set forth be enacted.

ARTICLE 14

AIR POLLUTION

(2.0) Sec. 11.150. Short Title.

This article shall be known and may be cited as the Air Pollution Control Code.

(1.0) Sec. 11.151. Definitions.

The terms as used in this article shall have the following meaning:

1. Air contaminant - Any particulate matter, gas or vapor (exclusive of water vapor), including but not limited to smoke, charred paper, dust, soot, grime, carbon or any other particulate matter, or irritating odorous matter, fumes or gases, or any combination thereof.

2. Air contaminant source - Any source of emission of an air contaminant whether privately or publicly owned or operated.

3. Air pollution - The presence in the ambient air of one or more air contaminants in quantities, of characteristics and of a duration which directly and proximately cause or contribute to injury to human, animal or plant life or health, or the property, or which unreasonably interfere with the enjoyment of life or use of property.

4. Air pollution control device - Any method, process or equipment which removes, reduces or renders less obnoxious air contaminants emitted into the ambient air.

5. Ambient air - All space outside of buildings, stacks of exterior ducts.

6. ASME - American Society of Mechanical Engineers.

7. ASTM - American Society for Testing and Materials.

8. Board - Air Pollution Control Board of Appeals.

9. BTU - British Thermal Unit(s).

10. City - City of Independence, Missouri.

11. Director - The Director of Health or his duly authorized representative.

12. Existing - Equipment, machines, devices, articles, contrivances, installations or similar items which are in being and have not been abandoned on the effective date of this ordinance or when prior to such effective date, actual construction has been lawfully contracted for or begun or vested property rights to proceed with such construction have otherwise been acquired.

13. Fuel burning equipment used for indirect heating - A device where the combustion of fuels to produce usable heat is transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to, the products of combustion.

14. Multiple chamber incinerator - Any article, machine, equipment, contrivance, structure or part of a structure, used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned. The refactories shall have a Pyrometric Cone Equivalent of at least 31, tested according to the method described in the American Society for Testing Materials, Method C-24-56.

15. New - Equipment, machines, devices, articles, contrivances, installations or similar items, except existing things erected, installed, reconstructed or replaced, and existing things altered, repaired, or rebuilt at a replacement cost of thirty (30) percent or more of the total replacement cost of the unit manufacturing process subsequent to the effective date of this ordinance or returned to operation having been abandoned. Replacement cost, as used herein, shall not include the installed cost of air pollution control equipment on existing equipment.

16. Open burning - Any burning of combustible materials wherein the products of combustion are emitted directly into the ambient air without passing through a stack or chimney.

17. Particulate matter - Any material, except water, that exists in a finely divided form as a liquid or solid at standard conditions.

18. Person - Any individual, partnership, co-partnership, firm, company, public or private corporation, association, joint stock company, trust, estate, political subdivision or any federal or state governmental agency, board, department or bureau, or any other legal entity whatever which is recognized by law as the subject of rights and duties.

19. Premises - Land, improvements and the ambient air above such land or improvements.

20. Process - Any reaction, operation, or treatment, the equipment used in connection therewith, and all methods or forms of manufacturing or processing that may emit any air contaminant.

21. Process weight - The total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels and excluding air introduced for purposes of combustion.

22. Refuse - Any combustible waste materials, including but not limited to garbage, rubbish, leaves, limbs, logs and other material containing carbon in a free or combined state, excluding "trade waste" as herein defined.

23. Ringelmann Chart - The Ringelmann Chart as published and described in the U. S. Bureau of Mines Information Circular 8333.

24. Salvage operation - Any business, trade or industry engaged in whole or in part in salvaging or reclaiming any product or material, including but not limited to, metals, chemicals, shipping containers or drums.

25. Source operation - The last operation preceding the emission of an air contaminant which operation (a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion of fuel, and (b) is not an air pollution abatement control device.

26. Standard conditions - A gas temperature of 60-degrees Fahrenheit and gas pressure of 14.7 pounds per square inch absolute.

27. Trade waste - Solid, liquid, or gaseous material resulting from the construction or the prosecution of any business, trade, industry or demolition operation, including but not limited to, wood, plastics, cartons, grease, oil, chemicals, and cinders, but excluding "refuse" as herein defined.

28. Residual fuel oil - Fuel oil variously known as Bunker C., PS 400, and number six (6) as defined in ASTM D. 396 487 (1959).

29. Smoke - Small gas-borne particles resulting from combustion, consisting or carbon ash, and other material.

30. Source gas volume - The volume of gas arising from a process or other source operation.

(2.0)
(15.0) Sec. 11.152. Administration and Enforcement.

A. The Director shall administer the provisions of the ordinance.

B. Fire Prevention Chief - An assigned member of the Fire Department.

C. Hearings

1. If, in the opinion of the Director, any investigation hereunder indicates that a violation of this Article may exist, he may order a hearing. In such event the Director shall issue and cause to be served upon the person alleged to be in violation, a written receipted notice of complaint, which shall specify the provision of this Article, including any regulation hereunder, which such person is alleged to be in violation of, and a statement of the manner in, and the extent to which such person is alleged to be in violation of this ordinance. Such notice shall require such person to answer the complaint at a formal hearing before the Director at a time not less than fifteen (15) days after the date of such notice. After such formal hearing the Director may issue such order as he deems appropriate to eliminate any violation found by the Director and compel compliance with the regulation or other provision of this Article which such person shall have been found by the Director to have violated.

2. Any order issued by the Director shall become final and binding unless the person against whom such order is issued shall within fifteen (15) days after the date of issuance of such order request the Director, in writing, to refer such order to the Board as hereinafter provided. Such appeal shall stay enforcement of such order issued by the Director.

D. Inspections

The Director may, upon reasonable notice, enter and inspect any facilities constituting any air contaminant source located on any premises, at any reasonable time for the purpose of ascertaining the state of compliance with the regulations made part of this Article and making tests and samples as provided for in Subsection H hereof. No person shall refuse entry or access to the Director, or his representative, upon presentation of appropriate identification and authority; nor shall any person obstruct, hamper or interfere with any such inspection or unreasonably interfere with such tests or sampling. Upon request, the owner or operator of the premises shall receive a report setting forth facts found which relate to compliance status and as a result of such tests and sampling.

E. Sampling and Testing

1. The Director is hereby authorized to conduct or cause to be conducted any test or sampling of the operation of any equipment which, in his opinion, may result in emissions in violation of any regulation in effect hereunder. Any test or sampling may be conducted by any method, other than the particular method as may be specified in any regulation hereunder, provided such substitute method is technically equivalent and mutually agreed to in writing by the Director and the operator of the air contaminant source involved. All tests shall be conducted by reputable, qualified personnel. At the request of the Director, the person responsible for the source to be tested shall provide necessary test ports in stacks or ducts and such other safe and proper facilities exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants, and shall cooperate with the Director so as to permit such tests to be made, provided that such tests shall not unreasonably interfere with normal operations of the plant. Both the Director and the operator of the equipment tested may be present at the test and each shall be entitled to a copy of the results, in writing, and signed by the person responsible for the tests. If the results of the test or sample show that the equipment is violating any of the provisions of this Article, the cost and expenses of the test shall be paid by the operator of such equipment. If no violations are disclosed, the City shall pay such costs and expenses.

2. Upon notification by the Director to the operator of any air contaminant source that emission tests are considered necessary, such person may elect to conduct such tests and sampling, in which event such person shall notify the Director of such election and of the time and date such person proposes to conduct such tests and sampling, in which case such person shall pay all costs and expenses incurred in making such test or taking such sample. In any such test conducted by such person, the Director may require that his duly authorized representative be present during the conduct of such tests and the taking of such samples. Tests or samplings made by the operator shall

not prohibit the Director, if the Director so elects, from making independent tests or samplings; the costs and expenses thereof to be paid by the City. In either event, the Director and the person who is the operator of such equipment shall be entitled to a complete detailed report of all tests and samplings.

F. Reports

1. The Director may require persons owning or operating any air contaminant source to file from time to time reports and information relating to the rate, period of emission, and composition of effluent from any air contaminant source including the location of such source, size and height of air contaminant outlets, processes employed, fuel used, and the nature and time periods and duration of emissions, and such other relative information as is available to such person or reasonably capable of being assembled from the normal operating records of such person.

2. Any person found to be in violation of any regulation under this Article shall, if required by agreement or by final order of the Director or the Board find such violation, file such periodic reports, as may be required, showing such person's progress toward compliance; provided that such person shall not be required to file further progress reports after notifying the Director of full compliance with such order.

G. Enforcement - Order of Abatement

1. Whenever the Director determines that the terms or conditions of this ordinance have been violated, he may order that the violation be abated within a reasonable time to be prescribed by him; such order to be served by registered mail.

2. In the event the Director determines that: (a) the person is taking all reasonable actions available to him to comply with the time limitations, but such compliance is not possible; (b) the delay is caused by conditions beyond the jurisdiction and control of such person; or (c) the imposition of the time limitation will cause an undue hardship; then the Director may grant such additional extensions of time as are necessary under the criterion set forth above.

3. In the event that a violation of this ordinance occurs, the Director may request the City Counselor to file a prosecution in the Municipal Courts.

4. In the event that it becomes necessary and is legally proper, the City Counselor is hereby empowered to institute proceedings in Circuit Court in the name of the City in order to enforce the terms and conditions of this ordinance.

5. Upon notice of the Director or his authorized representative that work on installation of a machine, contrivance, equipment, device, process or operation that may cause the emission of air contaminants is being prosecuted without a permit when such a permit is required or without having been registered where such registration is required or not in accordance with plans or specifications or data submitted with the application for such permit or such registration or contrary to any final order of the Board, such work shall be immediately stopped. The stop-work order shall be in writing and shall be served upon the person responsible for the premises on which the work is occurring or upon the person doing the work and shall state the conditions under which the work may be resumed.

6. Any person who shall continue any work in or about such machine, contrivance, equipment, device, process, or operation after having been served with a stop order except such work as he is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than fifteen ($15.00) dollars or more than five hundred ($500.00) dollars.

(51.13) Sec. 11.153. Open Burning Restriction.

A. Refuse Burning Restrictions

1. On and after May 1, 1969, no person shall dispose of refuse by open burning or cause, suffer, allow or permit open burning of refuse. Any open burning conducted prior to such effective date of this Subsection shall be permitted only between the hours of 10:00 a.m. and 4:00 p.m.

2. If municipal refuse collection is not provided by the City, open burning of household refuse originating from a single-family residence shall not be in violation of Subsection A-1, provided that such burning takes place on the premise where the refuse originates and further provided that such burning takes place within an area zoned for agricultural purposes. Any such open burning shall be permitted only between the hours of 10:00 a.m. and 6:00 p.m.

B. Prohibition of Salvage Operations by Open Burning

On and after May 1, 1969, no person shall cause or permit the conduct of a salvage operations by open burning. Any open burning salvage operation conducted prior to such effective date in this Subsection shall be permitted only between the hours of 10:00 a.m. and 4:00 p.m. by special permit.

C. Restrictions on Open Burning of Trade Wastes

1. No person shall cause or permit the disposal of trade wastes by open burning except as provided in this section.

2. The open burning of trade wastes may be permitted when it can be shown that such open burning is necessary and in the public interest. Any person intending to engage in open burning of trade wastes shall file a written request to do so with the Director and Chief of Fire Prevention. The application shall state the following:

   (a) The name, address and telephone number of the person submitting the application.

   (b) The type of business or activity involved.

   (c) A description of the proposed equipment and operating practices, the type, quantity and composition of trade wastes to be burned, and the expected composition and amount of air contaminants to be released to the atmosphere.

   (d) The schedule of burning operations.

   (e) The exact location where open burning will be used for disposal of trade waste.

   (f) Reasons why no method other than open burning can be used for disposal of trade waste.

   (g) Evidence that the proposed open burning has been approved by the Chief of Fire Prevention.

   Upon written approval of the application by the Director, the person may proceed with the operation without being in violation of this permit.

3. Any violation of the provisions relating to open burning shall be grounds for revocation of the trade waste burning permit.

(50.1) Sec. 11.154. Restrictions of Particulate Matter.

A. Restriction of Emission of Particulate Matter from Industrial Processes

1. General provisions

   (a) This regulation applies to any operation, process or activity except:

(1) Fuel burning equipment used for indirect heating;

(2) Burning of refuse; and

(3) Processing of salvageable material by burning.

(b) Process weight rate means a rate established as follows:

(1) For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof;

(2) For cyclical or batch source operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this Subsection, that interpretation which results in the minimum value for allowable emission shall apply.

(c) Emission test relating to this regulation shall be made in accordance with the standards in ASME Power Test Codes - PTC - 27, dated 1957 and entitled "Determining Dust Concentration in a Gas Stream".

2. Emission limitations

(a) No person shall cause, suffer, allow or permit the emission of particulate matter in any one hour from any air contaminant source in excess of the amount shown in Table 1 for the process weight allocated to such source, except as provided for in Subsection 2 (b) and 3 of this Section.

(b) The limitations established by Subsection 2 (a) shall not require the reduction of particulate matter concentration, based on the source gas volume, below the concentration specified in Table 2 for such volume: provided that, for the purposes of this Subsection 2 (b) the person responsible for the emission may elect to substitute a volume determined according to the provisions of Subsection 2 (c) and provided further that the burden of showing the source gas volume or other volume substituted therefor; including all the factors which determine such volume and the methods of determining and computing such volume, shall be on the person seeking to come within the provisions of this Subsection 2 (b).

(c) Any volume of gases passing through and leaving an air pollution control device may be substituted for the source gas volume of the source operation served by such air pollution control device, for the purposes of Subsection 2 (b), provided such air pollution control device emits no more than 40 percent of the weight of particulate matter entering thereto; and provided further that such substituted volume shall be corrected to standard conditions and to moisture content no greater than that of any gas stream entering such air pollution control device.

(d) No person shall cause, suffer, allow or permit the emission of particulate matter from any air contaminant source in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gases. If the provisions of this Subsection 2 (d) would permit a greater emission of particulate matter per hour than allowed by Subsection 2 (a), the provisions of this Subsection 2 (d) shall not apply.

3. Exception

(a) The provisions of Section 2 shall not be applicable to existing foundry cupolas operated not more than ten hours in any consecutive twenty-four (24) hours and not more than fifty (50) hours in any consecutive seven days, provided that each such existing foundry cupola shall be equipped with an air pollution control device so operated as to:

(1) Remove 85 percent by weight of all the particulate matter in the cupola discharge gases; or

(2) Release not more than 0.40 grain of particulate matter per standard dry cubic foot of exhaust gases, whichever is more stringent.

(3) All gases, vapors, and gas entrained effluents from such cupolas shall be incinerated at a temperature not less than 1200-degrees Fahrenheit for a period of not less than 0.3 seconds.

(b) The provisions of Subsections 2 (a), 2 (b), 2 (c) and 2 (d) of this Section 11.154 shall not apply to the drying processes in existing corn wet milling operations. All existing corn wet milling drying processes shall be equipped with gas cleaning devices and so operated as to remove not less than 99.5 percent by weight of all particulate matter in the dryer discharge gases.

(c) The provisions of Subsections 2 (a), 2 (b), 2 (c) and 2 (d) shall not apply to existing catalytic cracking units in petroleum refineries. All existing catalytic cracking units in refineries shall be equipped with gas cleaning devices and so operated as to remove not less than 99.7 percent by weight of all particulate matter in the cracking unit discharge gases.

(d) The provisions of this Section 11.154 shall not apply to a process during periods when a new fire is being built, during the start-up of the operation, during an operational breakdown, or while air pollution control equipment is being cleaned or repaired.

TABLE 1

Process Weight Rate		Rate of Emission	Process Weight Rate		Emission
Lb/hr	Tons/hr	Lb/hr	Lb/hr	Tons/hr	Lb/hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.00	19.2
600	0.30	1.83	30,000	15.00	25.2
800	0.40	2.22	40,000	20.00	30.5
1,000	0.50	2.58	50,000	25.00	35.4
1,500	0.75	3.38	60,000	30.00	40.0
2,000	1.00	4.10	70,000	35.00	41.3
2,500	1.25	4.76	80,000	40.00	42.5
3,000	1.50	5.38	90,000	45.00	43.6
3,500	1.75	5.96	100,000	50.00	44.6
4,000	2.00	6.52	120,000	60.00	46.3
5,000	2.50	7.38	140,000	70.00	47.8
6,000	3.00	8.56	160,000	80.00	49.0
7,000	3.50	9.49	200,000	100.00	51.2
8,000	4.00	10.4	1,000,000	500.00	69.0
9,000	4.50	11.2	2,000,000	1,000.00	77.6
10,000	5.00	12.0	6,000,000	3,000.00	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E=4.10\ p^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation: $E=55.0\ p^{0.11} - 40$, where E = rate of emission in lb/hr and p = process weight rate in tons/hr.

TABLE 2.

Source Gas Volume, SCFM (a)	Concentration GR/SCF (b)	Source Gas Volume, SCFM (a)	Concentration GR/SCF (b)
7,000 or less	0.100	140,000	0.038
8,000	0.096	160,000	0.036
9,000	0.092	180,000	0.035
10,000	0.089	200,000	0.034
20,000	0.071	300,000	0.030
30,000	0.062	400,000	0.027
40,000	0.057	500,000	0.025
50,000	0.053	600,000	0.024
60,000	0.050	800,000	0.021
80,000	0.045	1,000,000 or more	0.020
100,000	0.042		
120,000	0.040		

a = Standard cubic foot per minute.

b = Grain per standard cubic foot.

B. Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment used for Indirect Heating

1. General Provisions

(a) This section applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, or hot air or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels, including those such as coal, coke, lignite, coke breeze, gas, fuel oil, and wood or any combination thereof, but does not include refuse. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

(b) The heat content of coal shall be determined according to ASTM Method D-271-64 Laboratory Sampling and Analysis of Coal and Coke or ASTM Method D-2015-62T Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, and the heat content of oil shall be determined according to ASTM Method D-240-57T which publications are made a part of this regulation by reference.

(c) For purposes of this regulation, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all such fuel burning units at a plant or on a premise shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

(d) The amount of particulate matter emitted shall be measured according to the ASME Power Test Codes - PTC - 27, Dated 1957, and entitled "Determining Dust Concentration in a Gas Stream", which publication is made a part of this regulation by reference.

2. Emission Limitations

No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule (see Graph I which is included for illustrative purposes only):

(a) 0.60 pounds for each million BTU per hour input if the equipment has a capacity rating of 10 million or less. If the capacity rating of the fuel burning equipment is more than 10 million, the amount of particulate matter which may be emitted for each million BTU input shall decrease as the capacity rating of the fuel burning equipment increases, as follows:

(1) No more than 0.41 pounds for each million BTU input from equipment having a capacity rating of 50 million;

(2) No more than 0.35 pounds for each million BTU input from equipment having a capacity rating of 100 million;

(3) No more than 0.24 pounds for each million BTU input from equipment having a capacity rating of 500 million;

(4) No more than 0.21 pounds for each million BTU input from equipment having a capacity rating of 1,000 million;

(5) No more than 0.17 pounds for each million BTU input from equipment having a capacity rating of 2,000 million;

(6) No more than 0.14 pounds for each million BTU input from equipment having a capacity rating of 5,000 million;

(7) No more than 0.13 pounds for each million BTU input from equipment having a capacity rating of 7,500 million;

(8) No more than 0.12 pounds for each million BTU input from equipment having a capacity rating of 10,000 million or more.

The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating shall be determined either by linear interpolation, or by use of the following equation:

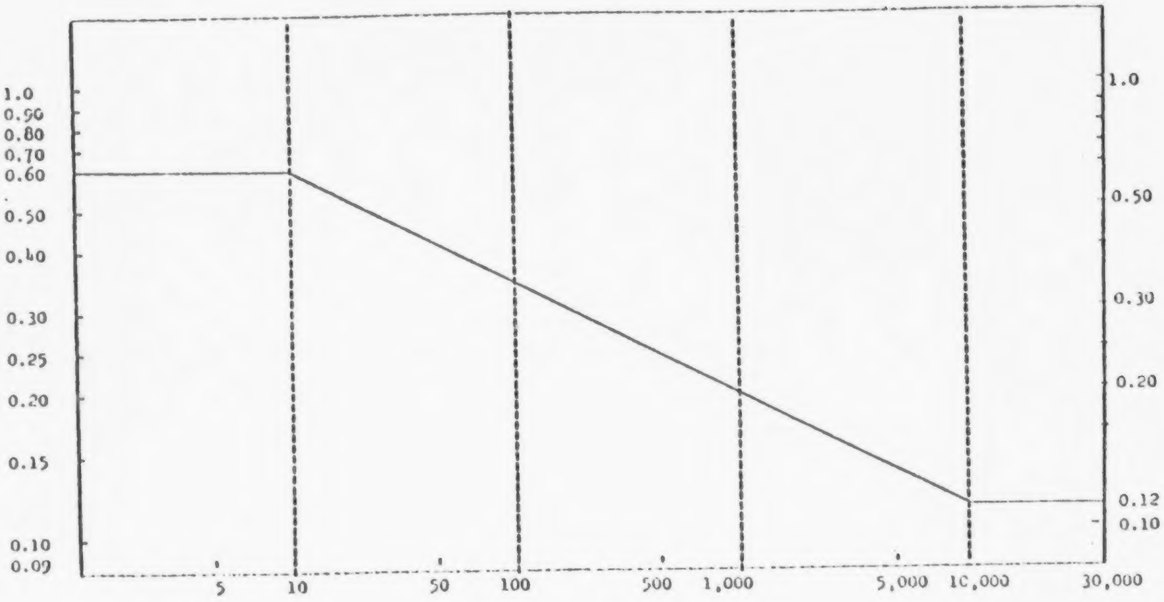
$$\log Y = 0.2330 \log X - 2.0111$$

where X represents each million BTU input, and Y represents the allowable pounds of emissions.

3. Compliance with the provisions of this Section 11.154 shall not be determined during periods when a new fire is being built, during start-up, change of load, fuel or other operating conditions, during an operational breakdown or other emergency conditions, while air pollution control equipment is being cleaned or repaired, or during sootblowing, but shall be determined during steady-state conditions.

4. The operator of equipment used for indirect heating in any plant may, at his option, elect to eliminate, for the purpose of determining compliance with the provisions of this Section 11.154 any

MAXIMUM ALLOWABLE PARTICULATE EMISSION
POUNDS PARTICULATE PER MILLION BTU HEAT INPUT



GRAPH I

fuel burning units normally scheduled to operate less than 1,500 hours per year, provided such units are equipped with air pollution control equipment having a collection efficiency of not less than 85%, in which case such units shall be deemed to comply with the provisions of this Section 11.154 and in any multiple unit plant shall be treated as a separate installation from other units in such plant. The Director may require such operator to submit proposed operating schedules of such units in advance and reports of actual operating schedules for any year.

C. Preventing Particulate Matter from Becoming Air-Borne

1. No person shall cause or permit the handling, or transporting or storage of any material in a manner which allows or may allow particulate matter to become air-borne beyond the premises where it originated to the extent that it remains visible in unreasonable amounts.

2. No person shall cause or permit a building or its appurtenances or a road or a driveway, or an open area to be constructed, used, repaired or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming air-borne. The Director may require such reasonable measures as may be necessary to prevent particulate matter from becoming air-borne, including but not limited to paving or frequent cleaning of roads, driveways and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.

3. The above Sections do not apply to farming operations.

(50.1.2) Sec. 11.155. Restrictions of Emission of Visible Air Contaminants.

A. Restrictions Applicable to Existing Installations, Except Incinerators

1. On and after May 1, 1969, no person shall discharge into the ambient air from any single source of emission whatsoever any air contaminant:

   (a) Of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart; or

   (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does that designated as No. 2 on the Ringelmann Chart.

2. This Section A shall not apply to incinerators.

B. Restrictions Applicable to New Installations and All Incinerators

No person may discharge into the ambient air from any single new source of emission whatsoever, nor from any incinerator, new or existing, any air contaminant - (a) of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or (b) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke designated as No. 1 on the Ringelmann Chart.

C. Exceptions

1. A person may discharge into the atmosphere from any single source of emission for such reasonable periods of time as the Director may find to be required by the nature of the operations, air contaminants:

    (a) Of a shade or density equal to nor darker than No. 3 on the Ringelmann Chart, or

    (b) Of such opacity as to obscure an observer's view to a degree equal to nor greater than that designated as No. 3 on the Ringelmann Chart, or

    (c) Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of this Section, this Section shall not apply.

2. The provisions of this Section shall not apply to the following:

    (a) The transfer of molten metals.

    (b) Emissions from transfer ladles.

    (c) Jet and other aircraft engines.

3. This section shall not apply to woodburning fireplaces and wood burning stoves in dwellings, nor to fires used for recreational purposes, nor to fires used solely for non-commercial preparation of food by barbecuing, nor to fires used solely for training firemen, nor to smoke generators used for the training of air pollution control inspectors.

D. Method of Measuring Visible Emissions

The Ringelmann Chart shall be used in grading the shade of opacity of visible air contaminant emissions. The Director may with the consent of the source operator employ any other means of measurement which give comparable results or results of greater accuracy.

(50.6) Sec. 11.156. Restriction of Emission of Odors.

A. No person shall cause or permit odorous emissions so as to cause a violation as defined in Subsection B. hereunder.

B. An odor occurrence shall be deemed a violation when a complaint from one person or more, is received and substantiated within two hours by observations of the Director. The Director shall deem the complaint valid only if he finds the occurrence of sufficient duration or frequency so that he can make two measurements of Scentometer No. 2 odor strength within a period of one hour, these measurements being separated by at least fifteen (15) minutes.

C. Odor measurement shall be made with a Scentometer as manufactured by Barnebey-Cheney Company or any other instrument, device, or technique designated by the Director as producing equivalent results.

(12.0) (50.1.2) Sec. 11.157. Emission of Visible Air Contaminants From Internal Combustion Engines.

A. No person may cause or permit the emission of visible air contaminants in excess of the amounts specified in Section 11.155, Subsection A, of these regulations from the internal combustion engine of:

1. Portable or stationary equipment for longer than 10 consecutive seconds;

2. A motor vehicle while the vehicle is stationary for longer than 10 seconds; or

3. A motor vehicle after the vehicle has moved more than 100 yards from a place where the vehicle was stationary.

4. This Section 11.157 shall not apply when the presence of uncombined water is the only reason for the failure of an emission to meet the requirements of this Section 11.157.

B. Exceptions

The provisions of this Section 11.157 shall not apply to jet or other aircraft engines.

(51.9) Sec. 11.158. Incinerators.

A. General provisions

1. This regulation shall apply to all incinerators.

2. The amount of particulate matter emitted from any incinerator shall be determined according to the ASME Power Test Codes -

PTC - 27, dated 1957, and entitled "Determining Dust Concentration in a Gas Stream". In calculating the amount of particulate matter in a stack gas the loading shall be adjusted to 12 percent carbon dioxide in the stack gas. Emissions shall be measured when the incinerator is operating at its maximum capacity or at any other burning rate during which emission of particulate matter is greater.

3. No person shall cause or permit the burning of refuse in any installation which is not designed for that purpose.

B. Restriction of Emissions of Particulate Matter from Incinerators

1. No person shall cause or permit the emission of particulate matter from the stack or chimney of any incinerator:

   (a) In excess of 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas;

   (b) Greater than 60 microns in diameter; or

   (c) Of a shade equal to or darker than that designated as No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to a degree equal to or greater than that designated as No. 1 on the Ringelmann Chart.

2. All incinerators shall be designed and operated so that all gases, vapors and entrained effluents shall, while passing through the final combustion chamber, be maintained at a temperature adequate to prevent the emission of objectionable odors. Provided, however, that the Public Health Engineer shall approve any other method of odor control which he determines is equally effective.

3. No incinerator shall be used for the burning of refuse unless such incinerator is a multiple chamber incinerator. Existing incinerators which are not multiple chamber incinerators may be altered, modified or rebuilt as may be necessary to meet this regulation. The Public Health Engineer may approve any other alteration or modification to an existing incinerator if such be found by him to be equally effective for the purpose of air pollution control as a modification or alteration which would result in a multiple chamber incinerator. All new incinerators shall be multiple chamber incinerators, provided that the Public Health Engineer may approve any other kind of incinerator if he finds in advance of construction or installation that such other kind of incinerator is equally effective for purposes of air pollution control as an approved multiple chamber incinerator.

4. Within thirty (30) days after the date on which installation or construction of an incinerator is completed, the installer shall file a request with the Public Health Engineer to schedule the performance tests provided in Subsection A-2 of this Section. If the results of the performance tests indicate that the incinerator is not operating in compliance with Subsections B-1 and B-2 of this Section, no person may cause or permit further operation of the incinerator, except for additional tests as outlined in Subsection A-2 of this section, until approval is received from the Public Health Engineer.

5. The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Public Health Engineer in accordance with good engineering practice. In case of conflict, the findings of the Public Health Engineer shall govern.

Existing incinerators which are not multiple chamber incinerators and do not otherwise meet the requirements of Subsection 1 of this provision shall be modified or rebuilt in compliance with this Section in accordance with the following schedule:

Rated Capacity	Latest Date for Compliance
1000 lbs/hr or above	12 months from effective date of regulation
999 lbs/hr or less	18 months from effective date of regulation

C. Permitted Hours of Operation

No person shall operate or cause or permit the operation of any incinerator at any time other than between the hours of 10 a.m. and 4 p.m. This restriction shall not apply to incinerators having a refuse burning capacity of one ton per hour or more.

D. Incinerator Permits

1. No person shall erect, construct, alter or install any incinerator in any building or other structure or on any premises until a permit has been secured from the Public Health Engineer pursuant to a written application therefor, upon forms furnished by the Public Health Engineer.

2. Each application for a permit shall be accompanied by two sets of such drawings, specifications and data as are required to verify that the proposed work will conform to the provisions of this chapter. One set of drawings, specifications and data shall remain on file in the office of the Public Health Engineer.

3. Any incinerator erected, constructed, altered or installed contrary to the plans or specifications submitted at the time of permit application shall cause the installation permit to become void.

4. Any person starting work for which a permit is required by this Code prior to obtaining a permit shall be deemed guilty of a misdemeanor.

(2.0) Sec. 11.159. Plans and Specifications.

A. Filing

The Superintendant of Building Construction shall not issue a permit for the erection, construction, re-construction, alteration or certificate of occupancy of any building or structure when the plans and specifications for such structure or occupancy include any fuel burning device or any article, machine, equipment or other contrivance, the use of which may cause the issuance of air contaminants or the use of which may eliminate or reduce or control the issuance of air contaminants until such plans and specifications for such fuel burning device, air contaminant source or air pollution control device have been filed with the Public Health Engineer or the Public Health Engineer shall have in writing waived such filing requirement.

B. Exceptions

The filing of plans and specifications with the Public Health Engineer shall not be required for any (a) oil-fired fuel-burning equipment burning No. 1 and No. 2 fuel oil; (b) gas-fired fuel-burning equipment; or (c) solid-fuel and residual fuel oil fired fuel-burning equipment when the maximum fuel input will not exceed 350,000 B.T.U. per hour.

(2.0) Sec. 11.160. Air Pollution Control Board of Appeals.

A. Appointed

1. The Mayor, with the approval of the City Council, shall appoint an Air Pollution Control Board of Appeals, which shall consist of five members. One member shall be an attorney licensed to practice in the State of Missouri. One shall be a professional engineer registered as such under the Missouri State Registration Law; one shall be a professional medical doctor registered as such under the Missouri State Registration Law; one shall be associated with heavy industry; and one shall be associated with organized labor. All members shall be appointed for a term of four years, except that for the initially appointed board, one member shall serve for one year, one member for two years, one member for three years, and two members for four years. Each

member shall be a person of good reputation, who shall have been a resident of Independence, Missouri, continuously for at least three years prior to his appointment. No member of the Board shall be an officer or an employee of any governmental agency. Vacancies on the Board shall be filled for the unexpired term by the Mayor, with the approval of the City Council. Members appointed to fill vacancies shall have qualifications which their predecessors were required to possess.

2. The Mayor shall designate one of the members of the Board to serve as Chairman.

3. The Mayor, with the approval of the City Council, shall appoint a Secretary to the Board for the purpose of administering it's affairs and maintaining it's records, but the Secretary shall have no vote on the Board.

B. Actions by Board

1. The Board shall set all hearings at a time not less than 30 days after requested by the Director or any person adversely affected or otherwise aggrieved by any order issued by the Director. The Board shall hear and determine appeals from actions and orders of the Director and all petitions for variance. Fifty Dollars ($50.00) shall accompany the notice of a-peal or the petition for variance.

2. Subject to the provisions of Section 11.161 hereof, all hearings held by the Board shall be open to the public, and all testimony taken before the Board shall be under oath and recorded stenographically, except that the Board may require the submission of voluminous or detailed or technical testimony in writing under oath. A transcript of the testimony so recorded shall be made available to any member of the public or to any participant in such hearing upon payment of reasonable charges for transcription thereof.

3. All hearings shall be had before one or more members of the Board which shall designate one of the members to act as a hearing officer. The member designated by the Board to act as hearing officer may issue in the name of the Board, notices of the hearing and subpoenas requiring attendance and testimony of witnesses and production of evidence relevant to any matter involved in such proceedings and administer the oath and affirmations and examine witnesses.

4. Each party to the proceeding may file written arguments and may appear at the hearing in person or by counsel and may make oral arguments, offer testimony or cross-examine witnesses or take any combination of such actions. Any person aggrieved or who

would be aggrieved by the emissions from the alleged air contaminant source shall be entitled to appear to testify with respect to such matter, subject to such restrictions and procedures as the Board may establish, but shall not be a party to such proceeding. In all proceedings before the Board involving variances, and in all appeals from any order issued by the Director, the applicant for a variance on the person or persons to whom such order is directed and the Director shall be the parties in interest.

5. In each such proceeding, each member of the Board who renders or joins in rendering an order of the Board shall, prior to taking action thereon, either hear all the evidence, read the record in full including all the evidence, or personally consider the portions of the record cited or referred to in the arguments or briefs. The parties may be written stipulation, or by oral stipulation in the record, at the hearing waive compliance with the provisions of this sub-section.

6. Every order by the Board shall be in writing approved by at least three members and shall be accompanied by findings of fact and conclusions of law, which shall be stated separately, on which the Board bases its order.

7. The Board shall issue its order and immediately notify each party to the proceeding, in writing, by certified mail. In cases in which any party is found to have violated any provision of this article the order of the Board shall fix a reasonable time for such person or persons to take such measures as may be necessary to prevent subsequent violation.

C. Variances

1. Any person who owns or is in control, or proposes to be in control of any air contaminant source, may submit a petition to the Director for a variance from any section of this ordinance governing the quality, nature, duration or extent of discharge of air pollution from such source. The petition shall be accompanied by the fee provided in Subsection B above, and shall include the following information.

   (a) The name, address and telephone number of the petitioner, or other person authorized to receive service of notices.

   (b) The type of business or activity involved in the application and the street address at which it is conducted.

   (c) A brief description of the article, machine, equipment or other contrivance or process involved in the application and the emissions occurring therefrom.

   (d) Each petition shall be signed by the petitioner or by some person on his behalf, and where the person signing is not the petitioner, it shall set forth his authority to sign.

   (e) The section of this ordinance from which the variance is sought.

   (f) Such other information and data with respect to such air contaminant source as may be required by the Chairman of the Board.

2. The Director or his authorized representative shall promptly investigate such petition and submit it with a recommendation to the Board as to the disposition thereof.

3. The Board may grant such variance if it finds that:

   (a) The emission occurring or proposes to occur does not constitute an immediate hazard to public health or safety; and

   (b) Compliance with the terms, conditions, and limitations of this ordinance from which variance is sought would result in an arbitrary and unreasonable taking of property or in the practical closing and elimination of any lawful business, occupation or activity in either case without sufficient corresponding benefit or advantage to the people.

4. No variance shall be granted pursuant to this Subsection except after publication of notice of the filing of such petition and until the Board has considered the relative interests of the petitioner, other owners of property likely to be affected by the discharges and the general public.

5. Variances may be granted for such periods of time and under such terms and conditions as shall be specified by the Board. Variances may be renewed by the Board upon application made at least sixty (60) days prior to the expiration of the term of Renewal application shall be considered in the same manner as the initial petition for variance was considered by the Board.

6. Such a variance may require a decrease of the emission during the variance period and the making of periodic reports of an improvement program and on compliance with the terms and conditions attached to the variance. A variance may be revoked or modified for failure to comply with the terms thereof or for failure to make a periodic report, if such is required.

7. Nothing in this Subsection, and no variance or renewal granted pursuant here shall be construed to prevent or limit the application of the emergency provisions and procedures of this ordinance.

(14.0) Sec. 11.161. Confidentiality.

No information relating to secret process or trade secrets affecting methods results of manufacture shall be disclosed to the public, if so requested by the owner or operator thereof, and all such information shall be kept confidential. At any public hearing any such confidential information shall, if requested by the owner or operator thereof, be received in and kept under seal.

(2.0) Sec. 11.162. Circumvention.

No person shall willfully cause or permit the installation or use of any device or any means which, without resulting in reduction in total amount of air contaminant emitted cancels or dilutes an emission of an air contaminant which would otherwise violate any regulation under this Article. This Section shall not apply when the only violation involved is a violation of a regulation based on concentration or presence of one or more air contaminants at locations beyond the premises on which such air contaminant source or sources are located.

(8.0) Sec. 11.163. Uncontrollable Force or Upset Conditions.

A. Uncontrollable Force

No emission which would otherwise be a violation of any regulation under this Article shall be deemed to be a violation, and no liabilities thereof shall be imposed or enforced, if such emission is the result of any act of God, war, laber disturbance, riot, catastrophe, or other beyond the control of such person.

B. Upset Conditions

Emissions exceeding any of the limits established by this ordinance as a direct result of unavoidable upset conditions in the nature of the process or unavoidable and unforseeable breakdown of any air pollution equipment or related operating equipment or as a direct result of shutdown of such equipment for necessary scheduled maintenance, shall not be deemed in violation of this ordinance, provided the following requirements are met.

1. Such occurrence in the case of unavoidable upset in or breakdown of equipment shall have been reported to the Director as soon as reasonably possible but no later than the next business day after the occurrence.

2. In the case of shutdown for necessary scheduled maintenance, the intent to shut down shall be reported to the Director at least twenty-four hours prior to the shutdown and the exception provided by this Section shall only apply in those cases where the maximum reasonable effort has been made to accomplish such maintenance during periods of non-operation of any related source operation and that it would be unreasonable or impossible to shut down the source operation during the maintenance period.

3. The person responsible for such emission shall, upon request of the Director, submit a full report of such occurrence, including a statement as to the amount of and chemical composition of the emissions, causes of and the scheduling and nature of the actions to be taken to minimuze or eliminante future occurrences including but not limited to action to correct the condition causing such emission to exceed said limits, to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded and to reduce the length of time said limits are exceeded.

(8.0) Sec. 11.164 Emergency Condition.

A. Notwithstanding other provisions of this Article, if the Director after investigation finds, or has cause to believe that a generalized or specific condition creates an emergency requiring immediate action to protect human health or safety in such areas, the Director may with the written approval of the Mayor or Mayor Pro-Tem, issue such order or orders to persons causing or contributing to such air contaminants into the ambient air. Upon receipt of any such order, the persons to whom it is directed shall immediately comply with such order.

B. Upon issuance of any such emergency order by the Director, he shall refer the matter to the Board immediately, which shall fix a time and place for hearing to be held before the board not later than forty-eight (48) hours after the issuance of the emergnecy order or such longer time as the persons to whom the order is directed may designate, to investigate and determine the factors causing or contributing to such emergency condition. All persons whose interests are prejudiced or affected in any manner by such order shall have the right to appear in person or by counsel at the hearing and to present evidence relative to the facts giving rise to such emergency order. Within twenty-four (24) hours after completion of the hearing, the Board shall affirm, modify or set aside the Director's emergency order or make such other emergency order or orders as the Board deems appropriate. Thereupon, the board shall notfiy all parties appearing in person or by counsel of it's determination, in writing, by certified mail.

(2.0) Sec. 11.165 Public Nuisance.

A. The emission into the ambient air of air contaminants resulting in air pollution, in violation of any regulation under this Article, is declared to be and shall constitute a public nuisance, and it shall be unlawful for any person to cause, permit or maintain any such public nuisance.

B. Pursuant to the provisions of Section 71.780 RSMo the emission into the ambient air of air contaminants resulting in air pollution, in violation of any regulation under this Article within the boundaries of the City and within unincorporated areas within one-half mile outside the boundaries of the City, is hereby declared to be a public nuisance which is injurous to the health and welfare of the inhabitants of the City.

(2.0) Sec. 11.166 Actionable Rights.

Persons other than the City shall not acquire actionable rights by virtue of this Article, including the regulations hereunder. A determination by the Director or the Board that air pollution or air contamination exists, or that this Article or any regulation hereunder is being violated, whether or not a proceeding or action is brought by the Director, Board or City, shall not create by reason thereof any presumption of law or finding of fact which shall inure to or be for the benefit of any person other than the City.

(15.0) Sec. 11.167 Penalties.

A. Every person convicted of a violation of this Article shall be punished by a fine of not less than $1.00, nor more than $500.00, or by imprisonment for not more than 90 days, or both such fine and imprisonment. Each day that a violation shall continue, after notice from the Director, shall constitute a separate offense.

B. Each willful disclosure of confidential information or conspiracy to disclose such information to any person other than the one entitled to such information in pursuance of his duties under this Article shall be deemed to be a misdeameanor, and shall be subject to such civil remedies and criminal penalties for such wrongful action as may be available against him.

Section 2.

In a case where a provision of this article including any regulation hereunder is found to be in conflict with any other ordinance, code, regulation in force in the city, provisions of this article shall prevail in the provisions of such other ordinance or ordinances, code, or regulations are hereby repealed to the extent that it may be found in conflict with this article or the regulations hereunder included.

Section 3.

That the immediate passage of this ordinance is by the City Council of the Independence, Missouri deemed to be necessary to preserve, protect, the health, welfare, and safety of the citizens of the said city and to comply with federal and state regulatory rules and regulations promulgated since the passage of the original Air Pollution Code of the said city hereto for repealed and that the immediate passage of this ordinance is deemed to be of an emergency nature by the said City Council and that it shall go into full force effective upon passage.

KANSAS CITY METROPOLITAN AREA REGULATIONS

(1.0) Regulation I DEFINITIONS

A. As used in these regulations, except as otherwise specifically provided in such regulations, the following words shall have the meaning ascribed to them in this regulation:

1. ASME -- American Society of Mechanical Engineers, 345 East 47th Street, New York, New York

2. ASTM -- American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania

3. Existing -- As applied to any equipment, machine, device, article, contrivance, or installation, shall mean in being, installed or under construction on September 25, 1968, except that if any equipment, machine, device, article, contrivance or installation is subsequently altered, repaired or rebuilt at a cost of 30 percent (30%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of this definition. For the purposes of Buchanan County the date of January 21, 1970 shall apply instead of September 25, 1968.

4. Incinerator -- Any article, machine, equipment, contrivance, structure, or part of a structure used to burn refuse or to process refuse material by burning other than by open burning as defined herein.

5. Kansas City Metropolitan Area -- The geographical area comprised of Jackson County, Cass County, Clay County, Platte County, Ray County, and Buchanan County.

6. Multiple chamber incinerator -- Any incinerator used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned, the refractories having a Pyrometric Cone Equivalent of 31, tested according to the method described in the American Society for Testing and Materials Method C-24-56.

7. New -- As applied to any equipment, machine, device, article, or contrivance or installation, shall mean not "existing" as defined herein.

8. Open burning -- The burning of any materials wherein air contaminants resulting from combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. For the purposes of this definition, a chamber shall be regarded as enclosed, when during the time combustion takes place, only such apertures, ducts, stacks, flues or chimneys as are necessary to provided combustion air and to permit the escape of exhaust gases are open.

9. Particulate matter -- Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

10. Process weight -- The total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

11. Refuse -- Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.

12. Residual fuel oil -- Fuel oil variously known as Bunker C, PS 400 and Number 6 as defined in ASTM D 396 487 (1959).

13. Ringelmann Chart -- "Ringelmann's Scale for Grading the Density of Smoke" as published in U.S. Bureau of Mines Information Circular 8333.

14. Salvage operation -- Any business, trade, industry or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material.

15. Smoke -- Small gas-borne particles resulting from combustion, consisting of carbon, ash, and other material.

16. Source gas volume -- The volume of gas arising from a process or other source operation.

17. Source operation -- The last operation preceding the emission of air contaminant, which operation (a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion fuel; and (b) is not principally an air pollution abatement operation.

18. Standard conditions -- A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

19. Trade waste -- Solid, liquid or gaseous material resulting from construction or the prosecution of any business, trade or industry, or any demolition operation including, but not limited to plastics, cardboard cartons, grease, oil, chemical or cinders.

(50.1.1) Regulation II RESTRICTION OF EMISSION OF PARTICULATE MATTER FROM INDUSTRIAL PROCESSES

A. General Provisions

1. This regulation applies to any operation, process, or activity except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials and except the burning of refuse and except the processing of salvageable material by burning.

2. Process weight means the total weight of all materials introduced into a source operation, including solid fuels, but excluding air introduced for purposes of combustion.

   a. For continuous or long-run steady-state source operations the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

   b. For cyclical or batch source operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

   Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this section, that interpretation which results in the minimum value for allowable emission shall apply.

3. Emission tests relating to this regulation shall be made following the standards in American Society of Mechanical Engineers Power Test Codes-PTC-27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream".

   Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary.

B. Emission Limitations

1. Except as provided for in Subsection B (2) and Section C of this Regulation II, no person shall cause, suffer, allow, or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in Table 1 for the process weight allocated to such source.

2. The limitations established by Subsection B (1) of this Regulation II shall not require the reduction of particulate matter concentration, based on the source gas volume, below the concentration specified in Table 2 for such volume; provided that, for the purposes of this Subsection B (2) the person responsible for the emission may elect to substitute a volume determined according to the provisions of Section B (3) of this Regulation II; and provided further that the burden of showing the source gas volume or other volume substituted therefor, including all the factors which determine such volume and the methods of determining and computing such volume, shall be on the person seeking to come within the provisions of this Section.

3. Any volume of gases passing through and leaving an air pollution abatement operation may be substituted for the source gas volume of the source operation served by such air pollution abatement operation for the purposes of Subsection B (2) of this Regulation II provided such air pollution abatement operation emits no more than 40 percent of the weight of particulate matter entering thereto; and provided further that such substituted volume shall be corrected to standard conditions and to a moisture content no greater than that of any gas stream entering such air pollution abatement operation.

4. Notwithstanding the provisions of Subsections B (1) and B (2) of this Regulation II, no person may cause, allow or permit the emission of particulate matter from any souce in a concentration in excess of 0.03 grain per standard cubic foot of exhaust gas.

C. Exceptions

1. The provisions of Subsections B (1), B (2), and B (4) of this Regulation II shall not apply to existing grey iron jobbing cupolas. For purposes of this Regulation II, a jobbing cupola is defined as a cupola which has a single melting cycle operated no more than 10 hours in any consecutive 7 days.

    a. All existing grey iron jobbing cupolas shall be equipped with gas cleaning devices and so operated as to remove not less than 85% by weight of all the particulate matter in the cupola discharge gases, or release not more than 0.4 grain of particulate matter per standard cubic foot of discharge gas, whichever is more stringent.

b. All gases, vapors, and gas entrained effluents from such cupolas shall be incinerated at a temperature not less than 1200° Fahrenheit for a period of not less than 0.3 seconds.

Table I

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.38	60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E=4.10P^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation: $E=55.0P^{0.11}-40$, where E=rate of emission in lb/hr and P=process weight rate in tons/hr.

2. The provisions of Subsections B (1), B (2), B (3) and B (4) of this Regulation II shall not apply to the drying process in existing corn wet milling operations. All existing corn wet milling drying processes shall be equipped with gas cleaning devices and so operated as to remove not less than 99.5% by weight of all particulate matter in the dryer discharge gases.

3. The provisions of Subsections B (1), B (2), B (3) and B (4) shall not apply to existing catalytic cracking units in petroleum refineries. All existing catalytic cracking units in refineries shall be equipped with gas cleaning devices and so operated as to remove not less than 99.7% by weight of all particulate matter in the cracking unit discharge gases.

4. The provisions of this Regulation II shall not apply to a process during periods when a new fire is being built, during the start-up of the operation, during an operational breakdown, or while air pollution control equipment is being cleaned or repaired.

Table 2

Source Gas Volume, SCFM[a]	Concentration GR/SCF[b]	Source Gas Volume, SCFM[a]	Concentration GR/SCF[b]
7,000 or less	0.100	140,000	0.038
		160,000	0.036
8,000	0.096	180,000	0.035
9,000	0.092		
10,000	0.089	200,000	0.034
20,000	0.071	300,000	0.030
30,000	0.062	400,000	0.027
40,000	0.057	500,000	0.025
50,000	0.053	600,000	0.024
60,000	0.050	800,000	0.021
80,000	0.045	1,000,000 or more	0.020
100,000	0.042		
120,000	0.040		

[a] Standard cubic foot per minute
[b] Grain per standard cubic foot

(51.5) Regulation III MAXIMUM ALLOWABLE EMISSION OF PARTICULATE MATTER FROM FUEL BURNING EQUIPMENT USED FOR INDIRECT HEATING

A. General Provisions

1. This Regulation III applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, or hot air or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels include those such as coal, coke, lignite, coke breeze, gas, fuel oil, and wood, but do not include refuse. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

2. The heat content of coal shall be determined according to ASTM method D-271-64 "Laboratory Sampling and Analysis of Coal and Coke" or ASTM method D-2015-66 "Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter". The heat content of oil shall be determined according to ASTM method D-240-64 "Heat of Combustion of Liquid Hydrocarbons by Bomb Calorimeter". The three publications cited in this Subsection A (2) are hereby made part of the Regulation III by reference.

3. For purposes of this regulation III, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel burning units at a plant or on a premise shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

4. The amount of particulate matter emitted shall be measured according to the American Society of Mechanical Engineers Power Test Codes -- PTC-27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream," which publication is made a part of this Regulation III by reference. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary.

B. Emission Limitations

No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule (see Graph I which is included for illustrative purposes only):

1. 0.60 pounds for each million BTU per hour input if the equipment has a capacity rating of 10 million or less. If the capacity rating of the fuel burning equipment is more than 10 million, the amount of particulate matter which may be emitted for each million BTU input shall decrease as the capacity rating of the fuel burning equipment increases, as follows:

   a. no more than 0.41 pounds for each million BTU input from equipment having a capacity rating of 50 million;

   b. no more than 0.35 pounds for each million BTU input from equipment having a capacity rating of 100 million;

   c. no more than 0.24 pounds for each million BTU input from equipment having a capacity rating of 500 million;

   d. no more than 0.21 pounds for each million BTU input from equipment having a capacity rating of 1,000 million;

   e. no more than 0.17 pounds for each million BTU input from equipment having a capacity rating of 2,000 million;

   f. no more than 0.14 pounds for each million BTU input from equipment having a capacity rating of 5,000 million;

   g. no more than 0.13 pounds for each million BTU input from equipment having a capacity rating of 7,5000 million;

   h. no more than 0.12 pounds for each million BTU input from equipment having a capacity rating of 10,000 million or more.

The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating shall be determined either by linear interpolation, or by use of the following equation:

$$\log Y = 0.2330 \log X - 2.0111$$

where X represents each million BTU input, and Y represents the allowable pounds of emissions.

C. Compliance with the provisions of this Regulation III shall not be determined during periods when a new fire is being built, during start-up, change of load, fuel or other operating conditions, during an operational breakdown or other emergency conditions, while air pollution control equipment is being cleaned or repaired, or during sootblowing, but shall be determined during steady-state conditions.

D. The operator of equipment used for indirect heating in any plant may, at his option, elect to eliminate, for the purpose of determining compliance with the provisions of this Regulation III, any fuel burning units normally scheduled to operate less than 1,500 hours per year, provided such units are equipped with air pollution control equipment having a collection efficiency of not less than 85%, in which case such units shall be deemed to comply with the provisions of this Regulation III and in any multiple unit plant shall be treated as a separate installation from other units in such plant. The Executive Secretary may require such operator to submit proposed operating schedules of such units in advance and reports of actual operating schedules for any year.

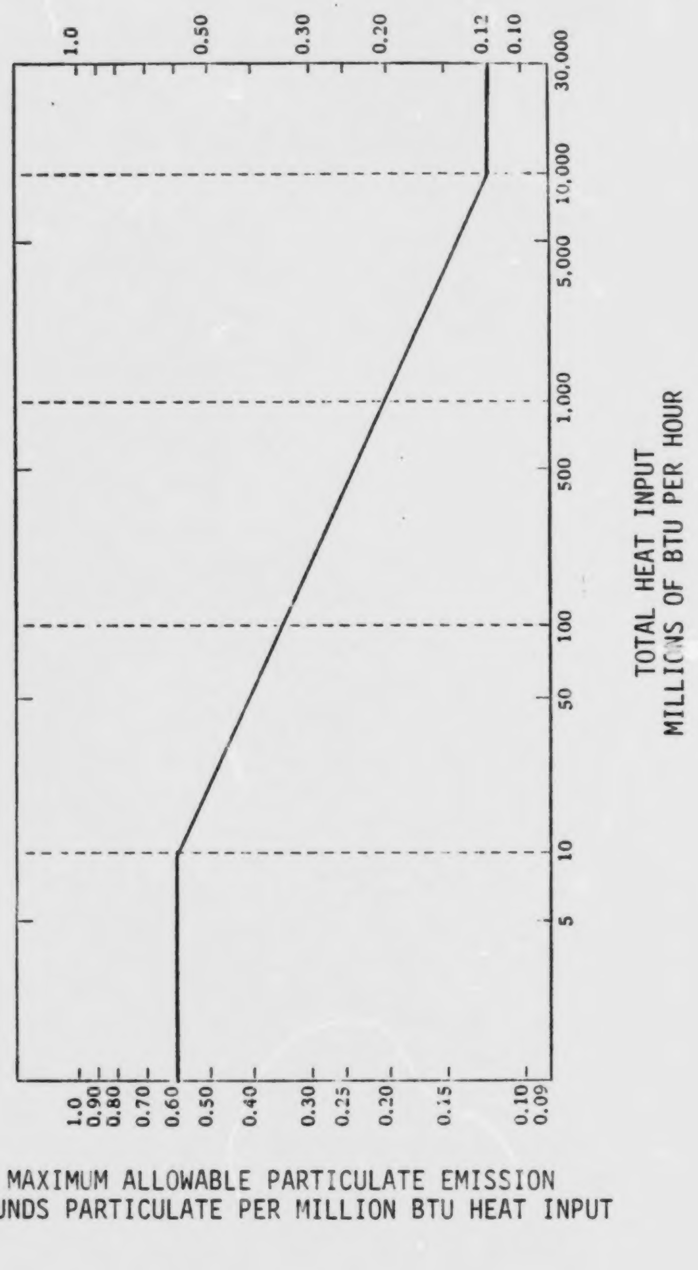
(50.1) Regulation IV PREVENTING PARTICULATE MATTER FROM BECOMING AIRBORNE

A. No person may cause or permit the handling or transporting or storage of any material in a manner which allows or may allow particulate matter to become airborne in such quantities and concentrations that it remains visible in the ambient air beyond the premises where it originates or that its presence may be found beyond the premises where it originates and that it has particulate matter shown to be larger than forty (40) microns in size. The size of the particulate matter shall be determined by microscopy or any other technique approved by the Executive Secretary and proven to be equally accurate.

B. No person may cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired or demolished without applying all such reasonable measures as may be required or prevent particulate matter from becoming airborne so that it remains visible beyond the premises where it originates or that its presence may be found beyond the premises where it originates. The Executive Secretary may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne including but not limited to paving or frequent cleaning of roads, driveways and parking lots; application of dust-free surfaces; application of water, and the planting and maintenance of vegetative ground cover. This Section B shall not apply to agricultural operations including tillage, planting, cultivating, or harvesting within a field, the moving of livestock on foot, or the hauling of produce within the confines of a farm.

GRAPH I

LIMITATIONS ON EMISSION OF PARTICULATE MATTER FROM FUEL BURNING INSTALLATIONS



C. Property-line Standard Limitations for Particulate Matter Becoming Airborne

No person shall cause, suffer, or permit the emission of any particulate matter so as to cause concentrations or particulate matter at any inhabited place to exceed any one of the following:

1.	Suspended particulates	80 micrograms/m^3	6-month geometric mean
	(High-Volume Sampler)	200 micrograms/m^3	2-hour arithmetic average for not less than five two-hour sampling periods within any one year. No more than 3 samples shall be taken during any 24-hour period
2.	Soiling Index	0.4Coh/1000 lineal feet	6-month geometric mean
	(AISI Paper tape sampler)	1.0Coh/1000 lineal feet	8-hour arithmetic average

(50.1.2) Regulation V RESTRICTION OF EMISSION OF VISIBLE AIR CONTAMINANTS

A. Restrictions Applicable to Existing Installations

No person may discharge into the ambient air from any single existing source of emission whatsoever any air contaminant a) of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke designated as No. 2 on the Ringelmann Chart. This Section A shall not apply to existing incinerators.

B. Restrictions Applicable to New Installations and All Incinerators

No person may discharge into the ambient air from any single new source of emission whatsoever, nor from any incinerator, new or existing, any air contaminant a) of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke designated as No. 1 on the Ringelmann Chart.

C. Exceptions

1. A person may discharge into the ambient air from any single source of emission for a period or periods aggregating not more than six minutes in any sixty minutes air contaminants a) of a shade or density not equal to nor darker than No.3 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree not equal to nor greater than does smoke designated as No. 3 on the Ringelmann Chart.

   For the purposes of this Subsection C (1) the Executive Secretary may for a specific source and for special conditions approve any other schedule.

2. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Section A or B of this Regulation V, such Sections shall not apply.

3. The provisions of Section A of this Regulation V shall not apply to the following:

   a. Transfer to molten metals
   b. Emissions from transfer ladles
   c. Existing grey iron jobbing cupolas as defined in Regulation II.

4. This Regulation V shall not apply during emergency conditions, provided that the Executive Secretary is notified, or to the following:

   a. Internal combustion engines, including jet aircraft engines, except as provided in Regulation VII.
   b. Wood burning stoves or fireplaces in dwellings
   c. Fires used for recreational purposes or fires used for the non-commercial preparation of food by barbecuing
   d. Fire used solely for the purpose of training firemen
   e. Smoke generators used for training air pollution control inspectors

5. This Section C shall not apply to incinerators.

D. Method of Measurement

The Ringelmann Chart shall be the standard in grading the shade or opacity of visible air contaminant emissions. The Executive Secretary may with the consent of the source operator employ any other means of measurement which give comparable results or results of greater accuracy.

(50.6) Regulation VI RESTRICTION OF EMISSION OF ODORS

No person may cause, permit or allow the emission of odorous matter in such concentrations and frequencies or for such durations that such odor can be perceived when one (1) volume of odorous air is diluted with seven (7) volumes of odor-free air for two (2) separate trials not less than 15 minutes apart within the period of one (1) hour.

These measurements may be made with a Scentometer as manufactured by the Barnebey-Cheney Company or by a similar technique that will give equivalent results, as agreed to at the time by the source operator and the Executive Secretary.

(12.0) (50.1.2) Regulation VII EMISSION OF VISIBLE AIR CONTAMINANTS FROM INTERNAL COMBUSTION ENGINES

A. No person may cause or permit the emission of visible air contaminants in excess of the amounts specified in Regulation V, Section A, of these regulations from the internal combustion engine of:

1. Portable or stationary equipment for longer than 10 consecutive seconds; or

2. A motor vehicle while the vehicle is stationary for longer than 10 seconds; or

3. A motor vehicle after the vehicle has moved more than 100 yards from a place where the vehicle was stationary.

4. This Regulation VII shall not apply when the presence of uncombined water is the only reason for the failure of an emission to meet the requirements of this Regulation VII.

B. Exceptions

The provisions of this Regulation VII shall not apply to jet or other aircraft engines.

(51.9) Regulation VIII INCINERATORS

A. General Provisions

1. This Regulation VIII shall apply to all incinerators except those situated on residential premises and used exclusively to dispose of refuse originating on the same premises, provided that the total number of dwelling units on that premises does not exceed four.

2. The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Executive Secretary in accordance with good engineering practice. In case of conflict, the findings of the Executive Secretary shall govern.

3. No incinerator shall be used for the burning of refuse unless such incinerator is a multiple chamber incinerator. Existing incinerators which are not multiple chamber incinerators may be altered, modified or rebuilt as may be necessary to meet this requirement. The Executive Secretary may approve any other alteration or modification to an existing incinerator if such be found by him to be equally effective for the purpose of air pollution control as a modification or alteration which would result in a multiple chamber incinerator. All new incinerators shall be multiple chamber incinerators, provided that the Executive Secretary shall approve any other kind of incinerator if it can be shown in advance of construction or installation that such other kind of incinerator is equally effective for purposes of air pollution control as an approved multiple chamber incinerator.

4. Within thirty (30) days after the date on which construction of an incinerator is completed, the operator shall file a request with the Executive Secretary to schedule the performance tests provided in Section C of this Regulation VIII. If the results of the performance tests indicate that the incinerator is not operating in compliance with Section B of this Regulation VIII, no person may cause or permit further operation of the incinerator, except for additional tests as outlined in Section C of this Regulation VIII, until approval is received from the Executive Secretary.

B. Restriction of Emissions from Incinerators.

1. No person may cause or permit the emission of particulate matter from the chimney, stack or vent of any incinerator in excess of the following:

   a. Incinerators with a refuse burning capacity of 200 or more pounds per hour: 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

   b. All other incinerators: 0.3 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

2. All incinerators shall be designed and operated so that all gases, vapors and entrained effluents shall, while passing through the final combustion chamber, be maintained at a temperature adequate to prevent the emission of objectionable odors. Provided, however, that the Executive Secretary shall approve any other method of odor control which is equally effective.

C. Performance Testing

1. Refuse burned in conjunction with the performance tests specified in this regulation shall be a representative sample of the refuse normally generated by the operation which the incinerator is intended to serve.

2. The amount of particulate matter emitted from any incinerator shall be determined according to the American Society of Mechanical Engineers Power Test code – PTC-27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream". This publication is hereby made a part of this Regulation VIII by reference. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary. In calculating the amount of particulate matter in stack gas, the loading shall be adjusted to twelve percent (12%) carbon dioxide in the stack gas. The carbon dioxide produced by burning of the liquid or gaseous fuel in the incinerator shall be excluded from the calculation to twelve percent (12%) carbon dioxide. Emissions shall be measured when the incinerator is operating at the burning capacity as defined in Section A (2) of this Regulation VIII, or at any greater operating rate requested by the source operator.

3. A performance test to determine compliance with the Ringelmann requirements specified in Regulation V of these regulations shall be performed by the Executive Secretary or his designated representative on each new incinerator, and each existing incinerator modified or rebuilt according to the schedule outlined in Section D of this Regulation VIII.

4. The performance test specified in Subsection C (2) of this Regulation VIII may be required on any incinerator, and shall be required for each new incinerator having a burning capacity of 1,000 pounds per hour or greater. The initial performance rest shall be performed at the expense of the vendor or operator by an independent testing organization or by any other qualified

person subject to the approval of the Executive Secretary. The performance test may be observed by the Executive Secretary or his designated representative.

D. Compliance Schedule for Existing Incinerators

Existing incinerators which are not multiple chamber incinerators and do not otherwise meet the requirements of Section B of this Regulation VIII shall be modified or rebuilt in compliance with this Section in accordance with the following schedule:

Rated Capacity	Latest Date for Compliance
1,000 lbs/hr or above	12 months from the effective date of this regulation
999 lbs/hr or less	18 months from the effective date of this regulation

(51.13) Regulation IX OPEN BURNING RESTRICTIONS

A. Refuse Burning Restrictions

On and after May 1, 1969 no person may conduct, cause, permit, or allow open burning of refuse.

B. Prohibitions of Salvage Operations by Open Burning

On and after 90 days from the effective date of this Regulation IX, no person may conduct, cause, permit, or allow a salvage operation by open burning.

C. Restrictions on Open Burning of Trade Wastes

On and after 180 days from the effective date of this Regulation IX no person may conduct, cause, permit, or allow the disposal of trade wastes by open burning.

D. Exceptions

1. Open burning of household refuse originating from a residence of fewer than five dwelling units shall not be in violation of Section A of this Regulation IX, provided that such burning takes place on the premise where the refuse originates, and provided further that such burning takes place either a) within an area zoned for agricultural purposes, or b) outside that portion of the metropolitan area surrounded by the corporate limits of Kansas City and every contiguous municipalty.

2. The open burning of trade wastes and vegetation may be permitted only when it can be shown that such open burning is the only feasible method of disposal and that disposal is in the public interest. Any person intending to engage in such open burning shall file a request to do so with the Executive Secretary. The application shall state the following:

   a. The name, address, and telephone number of the person submitting the application.

   b. The type of business or activity involved.

   c. A description of the proposed equipment and operating practices, the type, quantity, and composition of material to be burned, and the expected composition and amount of air contaminants to be released to the atmosphere, where known.

   d. The schedule of burning operations.

   e. The exact location where the open burning will occur.

   f. Reasons why open burning is the only feasible method of disposal and why disposal is in the public interest.

   g. Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction. Upon approval of the application by the Executive Secretary, the person may proceed with the operation without being in violation of Section A or C of this Regulation IX, but such approval shall not exempt the applicant from the provisions of any other law, ordinance or regulation.

3. The open burning of tree trunks, tree limbs, vegetation, or untreated waste lumber shall not be a violation of this Regulation IX when such burning takes palce at the site of a disposal area licensed for that purpose under the provisions of Section 64.470, RSMo, or at any other site approved by the Executive Secretary.

4. This Regulation IX shall not apply to the following:

   a. Fires set in connection with agricultural operations related to the growing or harvesting of crops.

   b. Fires set for the purpose of instructing and training firemen in the methods of fighting fires.

c. The burning of gaseous trade wastes in refinery or industrial chemical safety flares. Full smokeless-tip combustion, steam addition, or other flare smoke control methods approved by the Executive Secretary shall be used, and emissions may not be of a shade or density equal to or greater than #1 on the Ringelmann Chart.

d. Fires used for recreational purposes, or fires used for the non-commercial preparation of food such as by barbecuing.

(2.0) Regulation X APPROVAL OF PLANNED INSTALLATIONS

A. Definitions:

1. Commenced - an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a binding agreement or contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

2. Construction - fabrication, erection, or installation.

3. Modification - any physical change in, or change in method of operation of, an air contaminant source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.

4. Startup - the setting in operation of a source for any purpose.

5. Owner or operator - any person who owns, leases, operates, controls or supervises an air contaminant source.

B. General

1. No owner or operator shall commence construction or modification of any air contaminant source after the effective date of this regulation without first obtaining a permit from the Executive Secretary.

2. Each application for a construction permit shall be accompanied by site information, plans, descriptions, specifications, and drawings showing the design of the source, the nature and amount of emissions, and the manner in which it will be operated and controlled.

3. Any additional information, plans, specifications, evidence or documentation that the Executive Secretary may require shall be furnished upon request.

4. No permit to construct or modify shall be issued if it is determined that the proposed source will prevent the attainment or maintenance of ambient air quality standards, or violate any of the regulations pursuant to Chapter 203, RSMo.

5. Upon receipt of an application, the Executive Secretary shall act promptly, and shall notify the applicant in writing of his approval, conditional approval, or denial of the application. The Executive Secretary will set forth his reasons for any denial.

6. The Executive Secretary may impose any reasonable conditions, upon a permit, including conditions requiring the source to be provided with:

   a. Sampling ports of a suitable size, number and location,
   b. Safe access to each port,
   c. Instrumentation to monitor and record emission data, and
   d. Other sampling and testing facilities.

7. A permit may be cancelled if construction or modification work is not begun within two (2) years from the date of issuance, or if work is suspended for one (1) year.

8. Any owner or operator subject to the provisions of this regulations shall furnish the Executive Secretary written notification as follows:

   a. A notification of the anticipated date of initial startup of source not more than 60 days or less than 30 days prior to such date.

   b. A notification of the actual date of initial startup of a source within 15 days after such date.

9. Within 60 days after achieving the maximum production rate at which the source will be operated, but not later than 180 days after initial startup of such source, the owner or operator of such source shall conduct performance test(s) in accordance with methods and under operating conditions approved by the Executive Secretary and furnish the Executive Secretary a written report of the results of such performance test.

a. Such tests shall be at the expense of the owner or operator.

b. The Executive Secretary may monitor such tests and may also conduct performance tests.

c. The owner or operator of a source shall provide the Executive Secretary 15 days prior notice of the performance test to afford the Executive Secretary the opportunity to have an observer present.

10. Approval to construct shall not relieve any owner or operator of the responsibility to comply with other local, state and federal regulations.

C. Exceptions:

1. Fuel burning equipment which use gas or oil or grade #3 or lighter for space heating, air conditioning, or heating water, is used in a private dwelling; or has a heat input as specified by the manufacturer or designer of less than 350,000 BTU's per hour.

2. Mobile internal combustion engines.

3. The construction of a private residence.

4. Portable equipment including, but not limited to rock crushers, asphalt plants, and concrete batching plants shall be exempted from the requirements of this regulation after an initial permit has been obtained, provided that:

a. Each new location is reported to the Executive Secretary as early a possible, but in no case later than fourteen (14) days prior to ground breaking or initial equipment erection.

b. The equipment that was originally approved, shall be operated and maintained in a manner identical to that as specified in the initial construction permit.

5. Planned periodic modification of air contaminant sources shall be exempted from the requirements of this regulation, provided that:

a. A prior permit has been obtained for all planned air contaminant sources, and

b. Each modification be reported to the Executive Secretary as soon as possible, and,

c. The prior permit contains provisions for controlling emissions from all probable air contaminant sources that may be expected to come into existence as a result of the periodic modification.

6. Other sources of minor significance specified by the Executive Secretary.

(9.0) Regulation XI MEASUREMENT OF EMISSIONS OF AIR CONTAMINANTS

Executive Secretary May Make Tests

The Executive Secretary may conduct tests of emissions of air contaminants from any source. Upon request of the Executive Secretary, the person responsible for the source to be tested shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.

(3.0) Regulation XII SUBMISSION OF EMISSION INFORMATION

A. General Provisions

1. The owner or operator of any source shall, upon notification from the Executive Secretary, maintain records of the nature and amounts of emissions from such source and/or any other information as may be deemed necessary by the Executive Secretary to determine whether such source is in compliance with applicable emission limitations or other control measures.

2. The information recorded shall be reported to the Executive Secretary on a semiannual basis commencing with the first full semiannual period after the Executive Secretary's notification to such owner or operator of the record-keeping requirements. The semiannual periods are January 1 to June 30 and July 1 to December 31, except that the initial reporting period shall commence on the date the Executive Secretary's notification of the record-keeping requirements.

3. The records required by this regulation shall be completed on forms furnished by or satisfactory to the Executive Secretary, and shall be submitted within 45 days after the end of each reporting period.

4. All information collected or recorded in accordance with the provisions of this regulation shall be retained by the owner or operator for two (2) years after the date on which the pertinent report is submitted.

(2.0) Regulation XIII CIRCUMVENTION

No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. This regulation shall not apply when the only violation involved is violation of a regulation based on concentration or presence of one or more air contaminants at locations beyond the premises on which a source or sources are located

(6.0) Regulation XIV TIME SCHEDULE FOR COMPLIANCE

Except as otherwise specified, compliance with the provisions of these regulations shall be according to the following time schedule:

A. All new installations shall comply as of going into operation.

B. All existing installations not in compliance as of the effective date of these regulations shall be in compliance within six months of the effective date unless the owner or person responsible for the operation of the installation shall have submitted to the Executive Secretary in a form and manner satisfactory to him, a program and schedule for achieving compliance, such program and schedule to contain a date on or before which full compliance will be attained, and such other information as the Executive Secretary may require. If approved by the Executive Secretary, such date will be the date on which the person shall comply.

The Executive Secretary may require persons submitting such program to submit subsequent periodic reports on progress in achieving compliance.

C. All other dates notwithstanding, all existing installations in Buchanan County shall be in compliance with these regulations by September 1, 1970, and January 1, 1971 for Regulation IV, unless the owner or person responsible for the operation of the installation has submitted to the Executive Secretary in a form and manner satisfactory to him, a program and schedule for achieving compliance, such program and schedule to contain a date on or before which full compliance will be attained, and such other information as the Executive Secretary may require. If approved by the Executive Secretary, such date will be the date on which the person shall comply.

(50.2) Regulation XV RESTRICTION OF EMISSION OF SULFUR COMPOUNDS

A. Emission of Sulfur Compounds in Certain Amounts and Manner Restricted

1. No person may cause or permit the emission of sulfur dioxide from any premises in such manner and amounts that the concentrations exceed those shown in the following table in the ambient air at any occupied place beyond the premises on which the source is located:

Concentration [a]	Averaging Time	Maximum Allowable Frequency
.25 ppm or more	1 hour	Once in any 4 days at any sampling site.
.07 ppm or more	24 hours	Once in any 90 days at any sampling site.

2. If the concentrations and frequencies specified in Subsection A (1) of this Regulation XV are exceeded, each source which contributes to such concentrations and frequencies, and which emits 1,000 pounds or more of sulfur dioxide per hour shall be required to reduce its emissions by an amount specified by the Executive Secretary. Each source owner or operator shall file an emission reduction plan within 90 days after the date on which such requirement is made by the Executive Secretary. The emission reduction plan shall include a description of the process modifications, control equipment to be installed, or other measures to be taken to comply with the emission reduction required by the Executive Secretary. Implementation of the plan shall take place within one year after the date on which the plan is approved by the Executive Secretary.

(8.0) Regulation XVI RULES FOR CONTROLLING EMISSIONS DURING PERIODS OF HIGH AIR POLLUTION POTENTIAL

A. General Provisions

1. This regulation shall apply to all emissions from any source or any premises.

2. It may apply to all or part of the metropolitan area depending upon which pollutant fulfills the requirements of subsection B. 2., below, and whether or not air sampling reveals only a localized problem.

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[a] parts per million by volume

B. Air Pollution Alerts and Emergencies

1. Alert and emergency level values are stated:

   a. the product of the hourly sulfur dioxide concentration in parts per million, and the hourly particulate concentration in COH per 1,000 linear feet, or

   b. the concentrations of SO_2, CO, photochemical oxidants, particulates in COHs, or NO_2.

The basis of reference for the State of Missouri data shall be: Sulfur dioxide as measured by the continous modified West-Gaeke method or any other method standardized against such; particulates as measured by the automatic paper-tape sampler method, "ASTM Standard Method of Filtered Deposit, D-1704-61"; carbon monoxide as measured by the infrared spectophotometer method, MSA Bulletin No. 0705-10, Instrument Division, Pittsburgh, Pennsylvania; photochemical oxidants as measured by "Analytical Methods of the 'Intersociety Committee on Methods for Ambient Air Sampling and Analyses', Health Laboratory Science, 1970".

2. Alert Value:

   a. Yellow Alert value - any one of the following shall initiate the Yellow Alert

      1. Product reaching at 0.2 at any sampling station (24 hour average).

      2. Sulfur dioxide concentration reaching 0.30 ppm at any sampling station (24 hour average).

      3. Photochemical oxidant concentration reaching 0.10 ppm at any sampling station (1 hour average).

      4. Carbon monoxide concentration reaching 15 ppm at any sampling station (8 hour average).

      5. Particulate concentration reaching 3 COHs (375 ug/m^3) at any sampling station (24 hour average).

      6. NO_2 concentration reaching 0.6 ppm at any sampling station (1 hour average) 0.15 ppm (24 hour average).

b. Red Alert value - Any one of the following shall initate the Red Alert:

   1. Product reaching 0.8 at any sampling station (24 hour average).

   2. Sulfur dioxide concentration reaching 0.6 ppm at any sampling station (24 hour average).

   3. Photochemical oxidant concentration reaching 0.4 ppm at any sampling station (1 hour average).

   4. Carbon monoxide concentration reaching 30 ppm at any sampling station (8 hour average).

   5. Particulate concentration reaching 5 COHs (625 ug/m^3) at any sampling station (24 hour average).

   6. NO_2 concentration reaching 1.2 ppm at any sampling station (1 hour average) 0.3 ppm (24 hour average).

c. Emergency Alert value - Any one of the following shall initiate an Emergency Alert:

   1. Product reaching 1.2 at any sampling station (24 hour average).

   2. Sulfur dioxide concentration reaching 0.8 ppm at any sampling station (24 hour average).

   3. Photochemical oxidant concentration reaching 0.6 ppm at any sampling station (1 hour average).

   4. Carbon monoxide concentration reaching 40 ppm at any sampling station (8 hour average).

   5. Particulate concentration reaching 7 COHs (875 ug/m^3) at any sampling station (24 hour average).

   6. NO_2 concentration reaching 1.6 ppm at any sampling station (1 hour average) 0.4 ppm (24 hour average).

C. Air Pollution Watch

1. Air Pollution Watch procedures shall be initiated by the Executive Secretary upon receipt of a 36 hour high air stagnation advisory from the National Severe Storms Administration, or the National Air Pollution Control Administration for an area including all or part of the affected area.

2. The following watch procedured shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Watch conditions exist.

   b. Notify all affected governmental control agencies that Watch conditions exist, and the coordination of action is required.

   c. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 2 hours, with continual hourly review, at a central location, if such equipment is available and it is deemed necessary by the Executive Secretary.

   d. Inform the general public through the news media that a high air pollution potential exists, the area or areas where high initial readings have been obtained from sampling, and encourage persons suffering from respiratory ailments or heart conditions to take whatever precautions are most appropriate.

   e. Backyard incineration, including the open burning of leaves, tree trimmings, garbage, and other refuse shall be prohibited throughout the entire affected area.

   f. All variances or permits allowing open burning shall be temporarily rendered invalid for the duration of the high air pollution potential.

   g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary shall be notified that Watch conditions exist. All such industries shall be requested to voluntarily begin actions to reduce emissions of air contaminants from their operations, consistent with the provisions of their Yellow Alert plans. See Table I.

   h. The Executive Secretary may request through the news media that the use of automobiles be restricted to necessary driving only.

D. Yellow Alert

1. Yellow Alert procedures shall be initiated by the Executive Secretary if an air stagnation advisory and/or the Yellow Alert values are equalled or exceeded at any one sampling station within the advisory area, unless there is a current forecast of meteorological improvement within the next 24 hours.

2. The following Yellow Alert procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Yellow Alert condition exist.

   b. Notify all affected governmental control agencies that Yellow Alert conditions exist, and the coordination of action is required.

   c. Notify all hospitals within the affected area that Yellow Alert conditions exit.

   d. Increase the frequency of air monitoring at all sampling stations which are not continous at intervals not exceeding 1 hour, with continual hourly review at a central control location, if such equipment is available and it is deemed necessary by the Executive Secretary.

   e. Inform the general public through the news media that a Yellow Alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respirator ailments or heart conditions to take the most appropriate and expedient precautions.

   f. The Executive Secretary shall request very emphatically through the news media that all unnecessary use of automobiles be restricted, and that all entertainment functions and facilities be closed.

   g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Yellow Alert conditions shall initiate such plans upon notification by the Executive Secretary. See Table I.

   h. No open burning will be allowed anywhere within the affected area.

E. Red Alert

1. Red Alert procedures shall be initiated by the Executive Secretary if the following requirements are met:

   a. A 36 or 24-hour high air stagnation advisory is in effect for all or part of the affected area.

   b. The Red Alert values equalled or exceeded at any one monitoring station within the area.

The Red Alert can also be initiated if:

   a. The Red Alert value is equalled or exceeded as the arithmetic mean for 12 consecutive hours, and an air stagnation advisory

   b. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 24 consecutive hours and a forecast of stagnation for the following 12 hours is received.

2. The following Red Alert procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Red Alert conditions exist.

   b. Notify all affected governmental control agencies that Red Alert conditions exist and that coordination of action is required.

   c. Notify all hospitals within the affected area that Red Alert conditions exist.

   d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour with continual hourly review at a central control location.

   e. Inform the general public through the news media that a Red Alert exists, the geographical area or areas where the alert is appicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

f. Airlines operating within the Red Alert area shall be notified that such conditions exist, and that a reduction of flights out of the airport may be required.

g. Non-local vehicular traffic may be diverted around the Red Alert area depending upon which pollutant or pollutants caused the alert.

h. Local vehicular traffic shall through the news media be told to avoid certain areas, and emphatically told to restrict nonessential trips.

i. All incineration and open burning shall cease, regardless of location.

j. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Red Alert conditions shall initiate such plans upon notification by the Executive Secretary. See Table II.

F. Air Pollution Emergency

1. Emergency procedures shall be initiated by the Executive Secretary, if the following requirements are met:

   a. A 36 or 24- hour air stagnation advisory is in effect for all or part of the affected area.

   b. The air pollution emergency values are equalled or exceeded at any one monitoring station.

The Air Pollution Emergency procedures can also be initiated if:

   a. The air pollution emergency value is equalled or exceeded as the arithmetic mean of 12 consecutive hours and a forecast of stagnation for the following 12 hours is received, or

   b. The Red Alert is equalled or exceeded as the arithmetic mean for 24 hours and a forecast of stagnation for the following 12 hours is received, or

   c. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 36 hours and a forecast of stagnation for the following 12 hours is received.

2. The following Emergency Procedures shall apply:

a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that an emergency exists.

b. Notify all affected governmental control agencies that an emergency exists, and that coordination of action is required.

c. Notify all hospitals within the affected area that an emergency exists, and to be so prepared.

d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding ½ hour with continual half-hour review at a central control location.

e. Open burning and incineration shall cease throughout the area.

f. Facilities which are sources of air contaminant emissions and are required to have filed approved plans with the Executive Secretary shall initiate such plans upon notification by the Executive Secretary or his representative that Air Pollution Emergency conditions exist. See Table III.

g. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

h. All manufacturing facilities except those listed in F. 2. f. shall insititute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations to the extent possible without causing injury to persons or damage to equipment.

i. All airplane flights originating within the area of the Air Pollution Emergency shall be cancelled.

j. All places of employment described below shall immediately cease operation during the Air Pollution Emergency:

Mining and Quarrying
Contract Construction Work
Wholesale Trade Establishments
Schools and Libraries

Governmental Agencies except those needed to administer Air Pollution Alert Program and other essential agencies determined by the Executive Secretary to be vital for public safety and welfare and needed to administer the provisions of these regulations

Retail trade stores except those dealing primarily in sale of food or pharmacies

Banks, real estate agencies, insurance offices and similar businesses

Laundries, cleaners and dryers, beauty and barber shops and photographic studios

Amusement and recreational service establishments such as motion picture theaters

Automobile repair and automobile service garages

Advertising offices, consumor credit reporting, adjustment and collection agencies, printing and duplicating services, rental agencies and commercial testing laboratories

G. It should be made clear that an Air Pollution Watch, Yellow Alert, Red Alert or Emergency can be declared on the basis of deteriorating air quality alone; an air stagnation advisory need not be in effect. The appropriate episode status should be declared by the Executive Secretary when any monitoring site records ambient air quality below that designated in the criteria.

The levels used to designate an Air Pollution Emergency are those that pose an eminent and substantial endangerment to public health. Because these levels should not be permitted to occur, an air stagnation advisory should be declared when it appears that these levels may be reached.

H. Termination of Alerts

When in the judgement of the Executive Secretary meteorological conditions and pollutant concentrations are such to warrant discontinuance of any alert conditions, he shall notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that the alert has been discontinued, and issue a public notice to that effect.

TABLE I

YELLOW ALERT PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan
1. Electric Power Generating Facilities	1a. Reduction of emission by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 PM.M to 4:00 P.M.)
	c. Reduction of emissions by diverting electric power generation to facilities outside of area for which the alert is called.
2. Process Steam Generating Facilities	2a. Reduction of emissions by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.)
	c. Reduction of steam load demands consistent with continuing the operation of the plant.
3. Manufacturing industries of the following (SIC) group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29	3a. Reduction of air contaminant emissions by curtailing, postponing, or deferring production and allied operations.
	b. Stop all trade waste disposal production which emit particles, gases, vapors or malodorous substances including incineration.
	c. Reduction of heat load demands for processing to a minimum.

Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries -Group 20	
4. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	4a. Reduction of air contaminant emissions by curtailing or deferring production and allied operations.
	b. Stop all trade waste disposal practices which emit particles, gases, vapors or malodorous substances including incineration.
	c. Reduction of heat load demands for processing to a minimum.
5. Private, public and commercial refuse disposal operations.	5a. Stop all open burning including disposal of diseased trees and burning at fire fighting schools, except as required for disposal of hazardous materials or other emergency needs.
	b. Operation of incinerators shall be limited to the hours between 10:00 A.M. and 2:00 P.M.
6. Transportation	6a. The unnecessary operation of any motor vehicle should be restricted.

TABLE II

RED ALERT PLAN OBJECTIVES

All Yellow Alert plans shall be continued. In addition, the following steps shall be taken:

Air Contaminant Source	Requirements for Plan
1. Process steam generating facilities	1a. Maximum reduction of air contaminant emissions by utilization of fuels having

	the lowest ash and sulfur content.
	b. Maximum utilization of periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.) for soot blowing and boiler lancing.
	c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
2. Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemical and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries-Group 20	2a. Maximum reduction of air contaminant emission by, if necessary, postponing production and allied operations b. Maximum reduction of heat load demands for processing. c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a. Maximum reduction of air contaminant emissions by, if necessary, postponing production and allied operations.
4. Private, public and commercial refuse disposal operations.	4a. Stop operation of all incinerators.
5. Transportation	5a. Car pools and public transportation must be used in place of unnecessary motor vehicle operation.

TABLE III

AIR POLLUTION EMERGENCY PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan

All Yellow and Red Alert plans shall be continued. In addition, the following steps shall be taken:

1.	Process steam generating facilities	1a.	Maximum reduction of air contaminant emissions by reducing heat and steam load demands to values consistent with preventing equipment damage.
		b.	Maximum utilization periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.) for soot blowing and boiler lancing.
2.	Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, and Clay and Concrete Product Industries-Group 32 Primary Metal Industries-Group 33 Grain Industries-Group 23	2a.	Elimination of air contaminant emission from the manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
3.	Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a.	Elimination of air contaminant emissions from the manufacturing operations by ceasing, curtailing postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
		b.	Maximum reduction of heat load demands for processing.
4.	Private, public and commercial operations.	4a.	The following places of employment, if notified by the Executive Secretary, shall immediately cease operations:

	1. Mining and quarrying operations.
	2. Construction projects except as required to avoid emergent physical harm.
	3. Manufacturing establishments except those required to have in force an air pollution alert plan.
	4. Wholesale trade establishments.
	5. Governmental units, except as required to implement the provisions of these regulations and other operations essential to immediate protection of the public welfare and safety.
	6. Retail trade and service establishments except pharmacies, food stores and other similar operations providing for emergency needs.
	7. Other commercial service operations such as those engaged in banking, insurance real estate, advertising, etc.
	8. Educational institutions.
	9. Amusement and recreational facilities.
5. Transportation	5a. Motor vehicles shall only be used for private and public emergency needs.

(14.0) Regulation XVII PUBLIC AVAILABILITY OF EMISSION DATA

Emission data obtained from owners or operators of emission sources will be correlated with applicable emission limitations and other control measures, and will be made available to the public upon request.

SPRINGFIELD-GREEN COUNTY REGULATIONS

(1.0) Regulation I DEFINITIONS

A. As used in these regulations, except as otherwise specifically provided in such regulations, the following words shall have the meaning ascribed to them in this regulation:

1. ASME-Amercian Society of Mechanical Engineers, 345 East 47th Street, New York, New York.

2. ASTM-American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania.

3. Existing-As applied to any equipment, machine, device, article, contrivance, or installation, shall mean in being, installed, or under construction on September 24, 1969, except that if any equipment, machine, device, article, contrivance or installation is subsequently altered, repaired or rebuilt at a cost of 30 percent (30%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing or rebuilding existing equipment for the purpose of this definition. Replacement of refractory lining in cupolas shall be considered routine maintenance.

4. Incinerator-Any article, machine, equipment, contrivance, structure, by burning other than by open burning as defined herein.

5. Multiple chamber incinerator-Any incinerator used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned, the refractories having a Pyrometric Cone Equivalent of 31, tested according to the method described in the American Society for Testing and Materials, Method C-24-56.

6. New- As applied to any equipment, machine, device, article, or contrivance or installation, shall mean not "existing" as defined herein.

7. Open burning-The burning of any materials wherein air contaminants resulting from combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. For the purpose of this definition, a chamber shall be regarded as enclosed, when during the time combustion

takes place, only such apertures, ducts, stacks, flues or chimneys as are necessary to provide combustion air and to permit the escape of exhaust gases are open.

8. Particulate matter-Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

9. Process weight-The total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

10. Refuse-Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.

11. Residual fuel oil-Fuel oil variously known as Bunker C, PS 400 and Number 6 as defined in ASTM D 396 487 (1959).

12. Ringelmann Chart-"Ringelmann's Scale for Grading the Density of Smoke" as published in U.S. Bureau of Mines Information Circular 8333.

13. Salvage operation-Any business, trade, industry or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material.

14. Smoke-Small gas-borne particles resulting from combustion, consisting of carbon, ash, and other material.

15. Source gas volume-The volume of gas arising from a process or other source operation.

16. Source operation-The last operation preceding the emission of an air contaminant, which operation (a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion fuel; and (b) is not principally an air pollution abatement operation.

17. Springfield-Greene County area-The geographical area contained within Greene County.

18. Standard conditions-A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

19. Trade waste-Solid, liquid or gaseous material resulting from construction or the prosecution of any business, trade or industry, or any demolition operation including, but not limited to, plastics, cardboard cartons, grease, oil, chemicals or cinders.

(50.1.1) Regulation II RESTRICTION OF EMISSION OF PARTICULATE MATTER FROM INDUSTRIAL PROCESSES

A. General Provisions

1. This regulation applies to any operation, process, or activity except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials and except the burning of refuse and except the processing of salvageable material by burning.

2. Process weight means the total weight of all materials into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

   Process weight rate means a rate established as follows:

   a. For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

   b. For cyclical or batch source operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

      Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this section, that interpretation which results in the minimum value for allowable emission shall apply.

3. Emission tests relating to this regulation shall be made following the standards in Amercian Society of Mechanical Engineers Power Test Codes-PTC-27 dated 1957 and entitled "Determining Dust Concentration in A Gas Stream".

   Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary.

B. Emission Limitations

1. Except as provided for in Subsection B (2) and Section C of this Regulation II, no person shall cause, suffer, allow, or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in Table 1 for the process weight allocated to such source.

2. The limitations established by Subsection B (1) of this Regulation

II shall not require the reduction of particulate matter concentration specified in Table 2 for such volume; provided that, for the purpose of this Subsection B (2) the person responsible for the emission may elect to substitute a volume determined according to the provisions of Section B (3) of this Regulation II; and provided further that the burden of showing the source gas volume or other volume substituted therefor, including all the factors which determine such volume, shall be on the person seeking to come within the provisions of this Section.

3. Any volume of gases passing through and leaving an air pollution abatement operation may be substituted for the source gas volume of the source operation served by such air pollution abatement operation, for the purposes of Subsection B (2) of this Regulation II provided such air pollution abatement operation emits no more than 40 percent of the weight of particulate matter entering thereto; and provided further that such substituted volume shall be corrected to standard conditions and to a moisture content no greater than that of any gas stream entering such air pollution abatement operation.

4. Notwithstanding the provisions of Subsections B (1) and B (2) of this Regulation II, no person may cause, allow or permit the emission of particulate matter from any source in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gas.

C. Exceptions

1. The provisions of Subsections B (1), B (2), B (3), and B (4) of this Regulation II shall not apply to existing grey iron cupolas which have a single melting cycle operated no more than 12 hours in any consecutive 24 hours and no more than 60 hours in any consecutive 7 days.

   a. All existing grey iron cupolas shall be equipped with gas cleaning devices and so operated as to remove not less than 85% weight of all the particulate matter in the cupola discharge gases, or release not more than 0.4 grain of particulate matter per standard cubic foot of discharge gas, whichever is more stringent.

   b. All gases, vapors, and gas entrained effluents from such cupolas shall be incinerated at a temperature not less than 1200° Fahrenheit for a period of not less than 0.3 seconds.

2. The provisions of this Regulation II shall not apply to a process during periods when a new fire is being built, during the start-up of the operation, during an operational breakdown, or while air pollution control equipment is being cleaned or repaired.

Table 1

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.38	60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E = 4.10\ P^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$E=55.0\ P^{0.11} - 40$, where E= rate of emission in lb/hr and
P=process weight rate in tons/hr.

Table 2

Source Gas Volume, SCFM†	Concentration GR/SCF‡	Source Gas Volume, SCFM†	Concentration GR/SCF‡
7,000 or less	0.100	140,000	0.038
		160,000	0.036
8,000	0.096	180,000	0.035
9,000	0.092		
		200,000	0.034
10,000	0.089	300,000	0.030
20,000	0.071	400,000	0.027
30,000	0.062		
		500,000	0.025
40,000	0.057	600,000	0.024

Table 2 Continued

Source Gas Volume, SCFM†	Concentration GR/SCF‡	Source Gas Volume , SCFM†	Concentration GR/SCF‡
50,000	0.053	800,000	0.021
60,000	0.050		
		1,000,000 or more	0.020
80,000	0.045		
100,000	0.042		
120,000	0.040		

† Standard cubic foot per minute
‡ Grain per standard cubic foot

(51.5) Regulation III MAXIMUM ALLOWABLE EMISSION OF PARTICULATE MATTER FROM FUEL BURNING EQUIPMENT USED FOR INDIRECT HEATING

A. General Provisions

1. This Regulation III applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, or hot air or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels include those such as coal, coke, lignite, coke breeze, gas, fuel oil, and wood, but do not include refuse. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

2. The heat content of coal shall be determined according to ASTM method D-271-68 "Laboratory Sampling and Analysis of Coal and Coke" or ASTM method D-2015-66 "Gross Caloric Value of Solid Fuel by the Adiabatic Bomb Calorimeter". The heat content of oil shall be determined according to ASTM method D-240-64 "Heat of Combustion of Liquid Hydrocarbons by Bomb Calorimeter". The three publications cited in this Subsection A (2) are hereby made part of this Regulation III by reference.

3. For purposes of this Regulation III, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel burning units at a plant or on a premise shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

4. The amount of particulate matter emitted shall be measured according to the American Society of Mechanical Engineers Power Test Codes-PTC-27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream", which publication is made a part of this Regulation III by reference. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary.

B. Emission Limitations

No person may cause, allow or permit the emission of particulate matter in excess of that specified in the following schedule (see Graph I which is included for illustrative purposes only):

1. 0.60 pounds for each million BTU per hour input if the equipment has a capacity rating of 10 million or less. If the capacity rating of the fuel burning equipment is more than 10 million, the amount of particulate matter which may be emitted for each million BTU input shall decrease as the capacity rating of the fuel burning equipment increases, as follows:

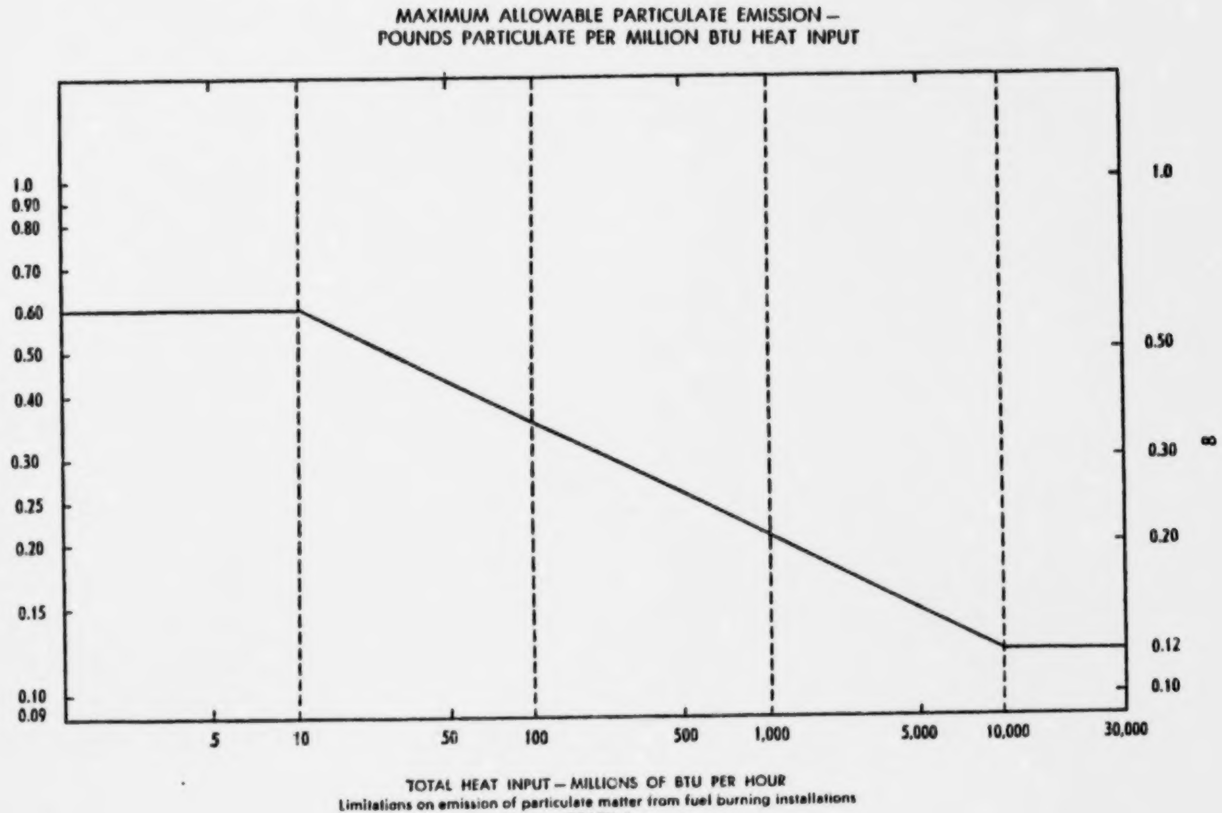
   a. no more than 0.41 pounds for each million BTU input from equipment having a capacity rating of 50 million;
   b. no more than 0.35 pounds for each million BTU input from equipment having a capacity rating of 100 million;
   c. no more than 0.24 pounds for each million BTU input from equipment having a capacity rating of 500 million;
   d. no more than 0.21 pounds for each million BTU input from equipment having a capacity rating of 1,000 million;
   e. no more than 0.17 pounds for each million BTU input from equipment having a capacity rating of 2,000 million;
   f. no more than 0.14 pounds for each million BTU input from equipment having a capacity rating of 5,000 million;
   g. no more than 0.13 pounds for each million BTU input from equipment having a capacity rating of 7,500 million;
   h. no more than 0.12 pounds for each million BTU input from equipment having a capacity rating of 10,000 million or more.

   The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating shall be determined either by linear interpolation, or by use of the following equation:

   $$\log Y = 0.2330 \log X - 2.0111$$

   where X represents each million BTU input, and Y represents the allowable pounds of emissions.

C. Compliance with the provisions of the Regulation III shall not be determined during periods when a new fire is being built, during start-up, change of load, fuel or other operating conditions, during an operational breakdown or other emergency conditions, while air pollution control equipment is being cleaned or repaired, or during



Limitations on emission of particulate matter from fuel burning installations

GRAPH 1

sootblowing, but shall be determined during steady-state conditions.

(50.1) Regulation IV PREVENTING PARTICULATE MATTER FROM BECOMING AIR-BORNE

A. No person may cause or permit the handling or transporting or storage of any material in a manner which allows or may allow particulate matter to become air-borne in such quantities and concentrations that it remains visible in the ambient air beyond the premises where it originates and which results in at least one complaint being filed with the Executive Secretary.

B. No person may cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming air-borne so that it remains visible beyond the premises where it originates. The Executive Secretary may require as a result of a complaint such reasonable measures as may be necessary to prevent particulate matter from becoming air-borne including but not limited to paving or frequent cleaning of roads, driveways and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.

C. Exceptions - Regulation IV shall not apply to the following:

1. Public roads

2. Agricultural operations including tilling, planting, cultivating, or harvesting within a field, the moving of livestock on foot, or the hauling of produce within the confines of a farm.

3. Driveways limited to residential use.

(50.1.2) Regulation V RESTRICTIONS OF EMISSION OF VISIBLE AIR CONTAMINANTS

A. Restrictions Applicable to Existing Installations

No person may discharge into the ambient air from any single existing source of emission whatsoever any air contaminant a) of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke designated as No. 2 on the Ringelmann Chart.

B. Restrictions Applicable to New Installations

No person may discharge into the air from any single new source of emission whatsoever, any air contaminant a) of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke designated as No. 1 on the Ringelmann Chart.

C. Exceptions

1. A person may discharge into the ambient air from any single source of emission for a period or periods aggregating not more than six minutes in any sixty minutes air contaminants a) of a shade or density not equal to nor darker than No. 3 on the Ringelmann Chart, or b) of such opacity as to obscure an observer's view to a degree not equal to nor greater than does smoke designated as No. 3 on the Ringelmann Chart.

   For the purposes of this Subsection C (1) the Executive Secretary may for a specific source and for special conditions approve any other schedule.

2. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Section A or B of this Regulation V, such Sections shall not apply.

3. The provisions of Section A of this Regulation V shall not apply to the following:

   a. Transfer of molten metals

   b. Emissions from transfer ladles

   c. Existing grey iron cupolas as defined in Regulation II.

4. This Regulation V shall not apply during emergency conditions, provided that the Executive Secretary is notified, or to the following:

   a. Internal combustion engines

   b. Wood burning stoves or fireplaces in dwellings

   c. Fires used for recreational purposes or fires used for the non-commercial preparation of food by barbecuing

   d. Fires used solely for the purpose of training firemen

   e. Smoke generators used for training air pollution control inspectors.

5. This Section C shall not apply to incinerators.

D. Method of Measurement

The Ringelmann Chart shall be the standard in grading the shade or opacity of visible air contaminant emissions. The Executive Secretary may with the consent of the source operator employ any other means of measurement which give comparable results or results of greater accuracy.

(50.6) Regulation VI RESTRICTION OF EMISSION OF ODORS

No person may cause, permit or allow the emission of odorous matter in such concentrations and frequencies or for such durations that such odor can be preceived when one (1) volume of odorous air is diluted with seven (7) volumes of odor-free air for two (2) separate trials not less than 15 minutes apart within the period of one (1) hour.

These measurements may be made with a Scentometer as manufactured by the Barnebey-Cheney Company or by a similar technique that will give equivalent results, as agreed to at the time by the source operator and the Executive Secretary.

(51.9) Regulation VII INCINERATORS

A. General Provisions

1. This Regulation VII shall apply to all incinerators except those situated on residential premises in the area zoned A-1 Agricultural District and used exclusively to dispose of refuse originating on that same premises.

2. The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Executive Secretary in accordance with good engineering practice. In case of conflict, the findings of the Executive Secretary shall govern.

3. No incinerator shall be used for the burning of refuse unless such incinerator is a multiple chamber incinerator. Existing incinerators which are not multiple chamber incinerators may be altered, modified or rebuilt as may be necessary to meet this requirement. The Executive Secretary may approve any other alteration or modification to an existing incinerator if such be found by him to be equally effective for the purpose of air pollution control as a modification or alteration which would result in a multiple chamber incinerator. All new incinerators shall be multiple chamber incinerators, provided that the Executive Secretary shall approve any other kind of incinerator if it can be shown in advance of construction or installation

that such other kind of incinerator is equally effective for purposes of air pollution control as an approved multiple chamber incinerator.

4. Within thirty (30) days after the date on which construction of an incinerator is completed, the operator shall file a request with the Executive Secretary to schedule the performance tests provided in Section C of this Regulation VII. If the results of the performance tests indicate that the incinerator is not operating in compliance with Section B of this Regulation VII, no person may cause or permit further operation of the incinerator, except for additional tests as outlined in Section C of this Regulation VII, until approval is received from the Executive Secretary.

B. Restriction of Emissions from Incinerators

1. No person may cause or permit the emission of particulate matter from the chimney, stack or vent of any incinerator in excess of the following:

    a. Incinerators with a refuse burning capacity of 200 or more pounds per hour: 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

    b. All other incinerators: 0.3 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

2. All incinerators shall be designed and operated so that all gases, vapors and entrained effluents shall, while passing through the final combustion chamber, be maintained at a temperature adequate to prevent the emission of objectionable odors. Provided, however, that the Executive Secretary shall approve any other method of odor control which is equally effective.

C. Performance Testing

1. Refuse burned in conjunction with the performance tests specified in this regulation shall be a representative sample of the refuse normally generated by the operation which the incinerator is intended to serve.

2. The amount of particulate matter emitted from any incinerator shall be determined according to the American Society of Mechanical Engineers Power Test Codes - PTC-27 dated 1957 and entitled "Determining Dust Concentration in a Gas Stream". This publica-

tion is hereby made a part of this Regulation VII by reference. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the Executive Secretary. In calculating the amount of particulate matter in stack gas, the loading shall be adjusted to twelve percent (12%) carbon dioxide in the stack gas. The carbon dioxide produced by burning of the liquid or gaseous fuel in the incinerator shall be excluded from the calculation to twelve percent (12%) carbon dioxide. Emissions shall be measured when the incinerator is operating at the burning capacity as defined in Section A (2) of this Regulation VII, or at any greater operating rate requested by the source operator.

3. A performance test to determine compliance with the Ringelmann requirements specified in Regulation V of these regulations shall be performed by the Executive Secretary or his designated representative on

   each new incinerator, and

   each existing incinerator modified or rebuilt according to the schedule outlined in Section D of this Regulation VII.

4. The performance test specified in Subsection C (2) of this Regulation VII may be required on any incinerator, and shall be required for each new incinerator having a burning capacity of 1,000 pounds per hour or greater. The initial performance test shall be performed at the expense of the vendor or operator by an independent testing organization or by any other qualified person subject to the approval of the Executive Secretary. The performance test may be observed by the Executive Secretary or his designated representative.

D. Compliance Schedule for Existing Incinerators

Existing incinerators which are not multiple chamber incinerators and do not otherwise meet the requirements of Section B of this Regulation VII shall be modified or rebuilt in compliance with this Section in accordance with the following schedule:

Rated Capacity	Latest Date for Compliance
1,000 lbs/hr or above	18 months from the effective date of this regulation
999 lbs/hr or less	30 months from the effective date of this regulation

(51.13) Regulation VIII OPEN BURNING RESTRICTIONS

A. Refuse Burning Restrictions

On and after January 1, 1970 no person may conduct, cause, permit, or allow open burning of refuse.

B. Prohibition of Salvage Operations by Open Burning

On and after July 29, 1970 no person may conduct, cause, permit, or allow a salvage operation by open burning.

C. Restrictions on Open Burning of Trade Wastes

On and after January 13, 1970 no person may conduct, cause, permit, or allow, the disposal of trade wastes by open burning.

D. Exceptions

1. Open burning of household refuse originating from a residence of fewer than five dwelling units shall not be in violation of Section A of this Regulation VIII, provided that such burning takes place on the premises where the refuse originates, and provided further that such burning takes place outside the corporate limits of Springfield and only within areas zoned A-1, Agricultural District.

2. The open burning of trade wastes and vegetation may be permitted only when it can be shown that such open burning is the only feasible method of disposal and that disposal is in the public interest. Any person intending to engage in such open burning shall file a request to do so with the Executive Secretary. The application shall state the following:

   a. The name, address, and telephone number of the person submitting the application.

   b. The type of business or activity involved.

   c. A description of the proposed equivalent and operating practices, the type, quantity, and composition of material to be burned, and the expected composition and amount of air contaminants to be released to the atmosphere, where known.

   d. The schedule of burning operations.

   e. The exact location where the open burning will occur.

   f. Reasons why open burning is the only feasible method of disposal and why disposal is in the public interest.

g. Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction. Upon approval of the application by the Executive Secretary, the person may proceed with the operation without being in violation of Section A or C of this Regulation VIII, but such approval shall not exempt the applicant from the provisions of any other law, ordinance or regulation.

3. The open burning of tree trunks, tree limbs, vegetation, or untreated waste lumber shall not be a violation of this Regulation VIII, when such burning takes place at the site of a disposal area licensed for that purpose under the provisions of Section 64.470, RSMo, or at any other site approved by the Executive Secretary.

4. This Regulation VIII shall not apply to the following:

   a. Fires set in connection with agricultural operations related to the growing or harvesting of crops.

   b. Fires set for the purpose of instructing and training firemen in the methods of fighting fires.

   c. Fires used for recreational purposes, or fires used for the non-commercial preparation of food such as by barbecuing.

(2.0) Regulation IX APPROVAL OF PLANNED INSTALLATIONS REQUIRED

A. The building department or other office responsible in any political subdivision within the metropolitan area shall not issue a permit for the erection, construction, reconstruction, alteration or occupancy of any building or structure when the plans and specifications for such structure or occupancy include any fuel-burning or refuse-burning device, or the occupancy of any building for industrial purposes, until such plans and specifications have been submitted to the Executive Secretary and pproved by him within 60 days as making adequate provisions for meeting the requirements of these regulations.

B. The filing of plans and specifications with the Executive Secretary shall not be required for any of the following:

1. Oil fired fuel-burning equipment burning No. 1 or No. 2 fuel oil exclusively.

2. Gas fired fuel burning equipment.

3. Solid fuel and residual fuel oil fired fuel burning equipment when the maximum heat input from such fuel will not exceed 350,000 BTU per hour.

(9.0) Regulation X MEASUREMENT OF EMISSIONS OF AIR CONTAMINANTS

Executive Secretary May Make Tests

The Executive Secretary may conduct tests of emissions of air contaminants from any source. Upon request of the Executive Secretary, the person responsible for the source to be tested shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.

(13.0) Regulation XI SUBMISSION OF EMISSION INFORMATION--AUTHORITY

The Executive Secretary may require the submission of information from any or all potential sources for purposes of maintaining an emission inventory.

(2.0) Regulation XII CIRCUMVENTION

No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. This regulation shall not apply when the only violation involved is violation of a regulation based on concentration or presence of one or more air contaminants at locations beyond the premises on which a source or sources are located.

(6.0) Regulation XIII TIME SCHEDULE FOR COMPLIANCE

Except as otherwise specified, compliance with the provisions of these regulations shall be according to the following time schedule:

A. All new installations shall comply as of going into operation.

B. All existing installations not in compliance as of the effective date of these regulations shall be in compliance within six months of the effective date unless the owner or person responsible for the operation of the installation shall have submitted to the Executive Secretary in a form and manner satisfactory to him, a program and schedule for achieving compliance, such program and schedule to contain a date on or before which full compliance will be attained, and such other information as the Executive Secretary may require. If approved by the Executive Secretary, such date will be the date on which the person shall comply.

The Executive Secretary may require persons submitting such program to submit subsequent periodic reports on progress in achieving compliance.

(50.2) Regulation XIV RESTRICTION OF EMISSION OF SULFUR COMPOUNDS

A. Definitions

The following definitions shall apply to this regulation:

1. ASME--American Society of Mechanical Engineers, 345 East 47th Street, New York, New York.

2. ASTM--American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania.

3. Existing--As applied to any equipment, machine, device, article, contrivance or installation, shall mean in being, installed, or under construction on February 24, 1971, except that if any equipment, machine, device, article, contrivance or installation is subsequently altered, repaired or rebuilt at a cost of 30 percent (30%) or more of its replacement cost exclusive of routine maintenance, it shall no longer be existing but shall be considered new as defined in this regulation. The cost of installing equipment designed principally for the purpose of air pollution control is not to be considered a cost of altering, repairing or rebuilding existing equipment for the purpose of this definition.

4. New--As applied to any equipment. machine, device, article, or contrivance or installation, shall mean not "existing" as defined herein.

5. Particulate matter--Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

6. Residual fuel oil--Fuel oil variously known as Bunker C, PS 400 and Number 6 as defined in ASTM D 396 487 (1959).

7. Source operation--The last operation preceding the emission of an air contaminant, which operation a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in

the case of combustion fuel, and b) is not solely an air pollution abatement operation.

8. Standard conditions--A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

B. General Provisions

1. Section C of this regulation shall apply to all emissions except those in which both

    a. fuel is burned primarily to produce heat and

    b. the sulfur compound emission is due primarily to the sulfur in the fuel burned.

2. Sections D and E shall apply to all emissions from any source or sources whatsoever.

3. The method of measuring sulfur trioxide and sulfuric acid or any combination thereof in stack gases shall be:

    Particulates (H_2SO_4--Acid Mists)

    "Atmospheric Emissions from Sulfuric Acid Manufacturing Processes"

    Ref. Public Health Service Publication 999-AP-13 (1965)
    Appendix B, Page 61-6 (Modified Monsanto Co. Method)[a]

    Gaseous (SO_3-SO_2)

    "Atmospheric Emissions from Sulfuric Acid Manufacturing Processes"

    Ref. Public Health Service Publication 999-AP-13 (1965)
    Appendix B, Page 85-7 (Shell Development Co. Method)[b]

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[a] Secondary reference for industrial emission sampling and analysis for particulates (sulfuric acid--acid mists) W. F. Patton, J. A. Brink "New Equipment and Techniques for Sampling Chemical Process Cases." J. Air Pollution Control Association 13, 162-66 (April 1963).

[b] Secondary reference for industrial emission sampling and analysis for gases (sulfur trioxide and sulfur dioxide) "Determination of Sulfur Dioxide and Sulfur Trioxide in Stack Gases," Emeryville Method Ser. 4S16/59a. Anal. Dept. Shell Development Co., Emeryville, California (1959).

4. The method of measuring hydrogen sulfide in the ambient atmosphere shall be:

   Lead-Acetate-Impregnated Filter Paper Procedure

   Ref. Sensenbaugh, J. D. and Hemeon, W. C. L.: A Low Cost Sampler for Measurement of Low Concentration of Hydrogen Sulfide. Air Repair 4:5 (May 1954)

5. The method of measuring sulfur dioxide in stack gases shall be:

   Gaseous (SO_3-SO_2)

   "Atmospheric Emissions from Sulfuric Acid Manufacturing Processes"

   Ref. Public Health Service Publication 999-AP-13 (1965) Appendix B, Page 85-7 (Shell Development Co. Method)

6. The method of measuring sulfur trioxide and sulfuric acid or any combination thereof suspended in the ambient atmosphere shall be:

   Particulate (H_2SO_4)

   Ref. B. T. Commins, "Determination of Particulate Acid in Town Air,"

   Analyst, 88, 364-67 (May 1963)

7. The method of measuring sulfur dioxide in the ambient atmosphere shall be:

   Gaseous (SO_2) colorimetric

   Ref. "Selected Methods for the Measurement of Air Pollutants"
   Public Health Service Publication No. 999-AP-11 (May 1965)
   "Determination of Sulfur Dioxide: West Gaeke Method"
   Page A1-5

   Gaseous (SO_2) conductimetric

   Ref. "ASTM Standards on Methods of Atmospheric Sampling and Analysis"
   2nd edition, Method D 1355-60, Method A, Page 11

8. Other test methods approved by the Executive Secretary may be used. The publications describing methods of measurement specified in this Section are hereby made a part of this regulation by reference.

C. Concentration of Sulfur Compounds in Emissions Restricted

1. No person shall cause or permit the emission into the atmosphere from any existing source specified in subsection B (1) of this regulation, gases containing more than 2,000 parts per million by volume of sulfur dioxide or 500 parts per million by volume of sulfur dioxide from any new source.

2. No person shall cause or permit the emission into the atmosphere from any source specified in subsection B (1) of this regulation, gases containing more than 70 milligrams per cubic meter of sulfuric acid or sulfur trioxide or any combination thereof or 35 milligrams per cubic meter of sulfuric acid, sulfur trioxide or any combination thereof from any new source (expressed as sulfuric acid).

3. Existing sources shall be modified or rebuilt in compliance with Section C of this Regulation XIV within nine (9) months of the effective date of this regulation.

D. Emission of Sulfur Compounds in Certain Amounts and Manner Restricted

1. No person may cause or permit the emission of sulfur dioxide from any source in excess of one thousand (1,000) pounds per hour except when such emissions do not cause or contribute to concentrations and frequencies exceeding those specified in the following table in the ambient air at any occupied place beyond the premises on which the source is located:

Concentration[a]	Averaging Time	Maximum Allowable Frequency
.25 ppm or more	1 hour	Once in any 4 days at any sampling site
.07 ppm or more	24 hour	Once in any 90 days at any sampling site

2. If the concentrations and frequencies in subsection D (1) of this Regulation XIV are exceeded, the person responsible for each source which causes or contributes to such concentrations and frequencies and which emits more than one thousand (1,000)

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[a] parts per million by volume

pounds per hour of sulfur dioxide shall file an emission reduction plan with the Executive Secretary for approval. Such a plan shall include a description of proposed process modifications, change in fuel use, control equipment to be installed, or any other methods which aid in the reduction of the concentrations and frequencies in the ambient air specified in subsection D (1). The approval and implementation of such a plan shall constitute compliance with this Regulation XIV.

3. No person shall cause or permit the emission of sulfuric acid or sulfur trioxide or any combination thereof from any premises in such manner and amounts that the concentrations and frequencies attributable to such emission exceed those shown in the following table in the ambient air at any place where people live, work or congregate beyond the premises on which the source is located.

Concentration of sulfuric acid or trioxide or any combination thereof*	Averaging time	Maximum Allowable Frequency
0.03 mg/m^3 or more	30 minutes or more	Once in any 48 hours
0.01 mg/m^3 or more	24 hours	Once in any 90 days

*Milligrams per cubic meter at standard conditions, measured and calculated as sulfuric acid.

4. No person shall cause or permit the emission of hydrogen sulfide from any premises in such manner and amounts that the concentrations attributable to such emissions in the ambient air at any occupied place beyond the premises on which the source is located exceed a concentration of 0.03 parts per million by volume for any averaging period of 30 or more minutes on more than two occasions in any 5 consecutive day period, or 0.05 parts per million by volume for any averaging period 30 or more minutes more than two times per year.

E. More Restrictive Limitation to Apply

In any situation the limitations imposed by the provisions of both Sections C and D of this Regulation XIV shall be assessed, and the more restrictive section shall apply.

F. Time Schedule for Compliance

For the purpose of this Regulation XIV, the effective date shall be 1-18-72, and the provisions of Regulation XIII shall apply accordingly.

(8.0) Regulation XV RULES FOR CONTROLLING EMISSIONS DURING PERIODS OF HIGH AIR POLLUTION POTENTIAL

A. General Provisions

1. This regulation shall apply to all emissions from any source or any premises.

2. It may apply to all or part of the affected area depending upon which pollutant fulfills the requirements of subsection B (2) below, and whether or not air sampling reveals only a localized problem.

B. Air Pollution Alerts and Emergencies

1. Alert and emergency level values are stated as:

   a. the product of the hourly sulfur dioxide concentration in parts per million, and the hourly particulate concentration in COH per 1,000 linear feet, or

   b. the concentrations of SO_2, CO, photochemical oxidants, particulates in COHs, or NO_2.

   The basis of reference for the State of Missouri data shall be: Sulfur dioxide as measured by the continuous modified West-Gaeke method or any other method standardized against such; particulates as measured by the automatic paper-tape sampler method, "ASTM Standard Method of Test for Particulate Matter in the Atmosphere, Optical Density of Filtered Deposit, D-1704-61"; carbon monoxide as measured by the infrared spectophotometer method, MSA Bulletin No. 0705-10, Instrument Division, Pittsburgh, Pennsylvania; photochemical oxidants as measured by "Analytical Methods of the 'Intersociety Committee on Methods for Ambient Air Sampling and Analyses', Health Laboratory Science, 1970".

2. Alert Values:

   a. Yellow Alert value - Any one of the following shall initiate the Yellow Alert:

1. Product reaching 0.2 at any sampling station (24 hour average).
2. Sulfur dioxide concentration reaching 0.30 ppm at any sampling station (24 hour average).
3. Photochemical oxidant concentration reaching 0.10 ppm at any sampling station (1 hour average).
4. Carbon monoxide concentration reaching 15 ppm at any sampling station (8 hour average).
5. Particulate concentration reaching 3 COHs (375 ug/m^3) at any sampling station (24 hour average).
6. NO_2 concentration reaching 0.6 ppm at any sampling station (1 hour average) 0.15 ppm (24 hour average).

b. Red Alert value - Any one of the following shall initiate the Red Alert:

1. Product reaching 0.8 at any sampling station (24 hour average).
2. Sulfur dioxide concentration reaching 0.6 ppm at any sampling station (24 hour average).
3. Photochemical oxidant concentration reaching 0.4 ppm at any sampling station (1 hour average).
4. Carbon monoxide concentration reaching 30 ppm at any sampling station (8 hour average).
5. Particulate concentration reaching 5 COHs (625 ug/m^3) at any sampling station (24 hour average).
6. NO_2 concentration reaching 1.2 ppm at any sampling station (1 hour average) 0.3 ppm (24 hour average).

c. Emergency Alert value - Any one of the following shall initiate an Emergency Alert:

1. Product reaching 1.2 at any sampling station (24 hour average).
2. Sulfur dioxide concentration reaching 0.8 ppm at any sampling station (24 hour average).
3. Photochemical oxidant concentration reaching 0.6 ppm at any sampling station (1 hour average).

4. Carbon monoxide concentration reaching 40 ppm at any sampling station (8 hour average).

5. Particulate concentration reaching 7 COHs (875 ug/m^3) at any sampling station (24 hour average).

6. NO_2 concentration reaching 1.6 ppm at any sampling station (1 hour average) 0.4 ppm (24 hour average).

C. Air Pollution Watch

1. Air Pollution Watch procedures shall be initiated by the Executive Secretary upon receipt of a 36 hour high air stagnation advisory from the appropriate federal weather forecasting official for an area including all or part of the affected area.

2. The following Watch procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Watch conditions exist.

   b. Notify all affected governmental control agencies that Watch conditions exist, and that coordination of action is required.

   c. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 2 hours, with continual hourly review, at a central control location.

   d. Inform the general public through the news media that a high air pollution potential exists, the area or areas where high initial readings have been obtained from sampling, and encourage persons suffering from respiratory ailments or heart conditions to take whatever precautions are most appropriate.

   e. Backyard incineration, including the open burning of leaves, tree trimmings, garbage, and other refuse shall be prohibited throughout the entire affected area.

   f. All variances or permits allowing open burning shall be temporarily rendered invalid for the duration of the high air pollution potential.

   g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary shall be notified that Watch conditions exist. All such industries shall be requested to voluntarily begin actions to reduce emissions of air contaminants from their operations, consistent with the provisions of their Yellow Alert plans. See Table I.

h. The Executive Secretary may request through the news media that the use of automobiles be restricted to necessary driving only.

D. Yellow Alert

1. Yellow Alert procedures shall be initiated by the Executive Secretary if the following conditions are met:

   a. An air stagnation advisory and the Yellow Alert values are equalled or exceeded at any one sampling station within the advisory area, unless there is a current forecast of meteorological improvement within the next 24 hours.

   b. Meteorological conditions are such that the pollutant concentrations can be expected to remain at the above levels for 12 or more hours or increase unless control actions are taken.

2. The following Yellow Alert procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Yellow Alert conditions exist.

   b. Notify all affected governmental control agencies that Yellow Alert conditions exist, and that coordination of action is required.

   c. Notify all hospitals within the affected area that Yellow Alert conditions exist.

   d. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour, with continual hourly review at a central control location.

   e. Inform the general public through the news media that a Yellow Alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

f. The Executive Secretary shall request very emphatically through the news media that all unnecessary use of automobiles be restricted, and that all entertainment functions and facilities be closed.

g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Yellow Alert conditions shall initiate such plans upon notification by the Executive Secretary. See Table I.

h. No open burning will be allowed anywhere within the affected area.

E. Red Alert

1. Red Alert procedures shall be initiated by the Executive Secretary if the following requirements are met:

a. A 36 or 24-hour high air stagnation advisory is in effect for all or part of the affected area.

b. The Red Alert values equalled or exceeded at any one monitoring station within the area.

The Red Alert can also be initiated if:

a. The Red Alert value is equalled or exceeded as the arithmetic mean for 12 consecutive hours, and [a] an [(HAPPA)] air stagnation advisory.

b. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 24 consecutive hours and a forecast of stagnation for the following 12 hours is received.

2. The following Red Alert procedures shall apply:

a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Red Alert conditions exist.

b. Notify all affected governmental control agencies that Red Alert conditions exist and that coordination of action is required.

c. Notify all hospitals within the affected area that Red Alert conditions exist.

d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour with continual hourly review at a central control location.

e. Inform the general public through the news media that a Red Alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

f. Airlines operating within the Red Alert area shall be notified that such conditions exist, and that a reduction of flights out of the airport may be required.

g. Non-local vehicular traffic may be diverted around the Red Alert area depending upon which pollutant or pollutants caused the alert.

h. Local vehicular traffic shall through the news media be told to avoid certain areas, and emphatically told to restrict non-essential trips.

i. All incineration and open burning shall cease, regardless of location.

j. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Red Alert conditions shall initiate such plans upon notification by the Executive Secretary. See Table II.

F. Air Pollution Emergency

1. Emergency procedures shall be initiated by the Executive Secretary, if the following requirements are met:

   a. A 36 or 24-hour high air stagnation advisory is in effect for all or part of the affected area.

   b. The air pollution emergency values are equalled or exceeded as the arithmetic mean of 4 consecutive hours at any one monitoring station.

   The Air Pollution Emergency procedures can also be initiated if:

   a. The air pollution emergency value is equalled or exceeded as the arithmetic mean of 12 consecutive hours and a forecast of stagnation for the following 12 hours is received, or

b. The Red Alert is equalled or exceeded as the arithmetic mean for 24 hours and a forecast of stagnation for the following 12 hours is received, or

c. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 36 hours and a forecast of stagnation for the following 12 hours is received.

2. The following Emergency Procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that an emergency exists.

   b. Notify all affected governmental control agencies that an emergency exists, and that coordination of action is required.

   c. Notify all hospitals within the affected area that an emergency exists, and to be so prepared.

   d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding ½ hour with continual half-hour review at a central control location.

   e. Open burning and incineration shall cease throughout the area.

   f. Facilities which are sources of air contaminant emissions and are required to have filed approved plans with the Executive Secretary shall initiate such plans upon notification by the Executive Secretary or his representative that Air Pollution Emergency conditions exist. See Table III.

   g. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

   h. All manufacturing facilities except those listed in F 2. f. shall institute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations to the extent possible without causing injury to persons or damage to equipment.

   i. All airplane flights originating within the area of the Air Pollution Emergency shall be cancelled.

j. All places of employment described below shall immediately cease operation during the Air Pollution Emergency:

Mining and Quarrying
Contract Construction Work
Wholesale Trade Establishments
Schools and Libraries

Governmental Agencies except those needed to administer Air Pollution Alert Program and other essential Agencies determined by the Executive Secretary to be vital for public safety and welfare and needed to administer the provisions of these regulations.

Retail trade stores except those dealing primarily in sale of food or pharmacies.

Banks, real estate agencies, insurance offices and similar businesses.

Laundries, cleaners and dryers, beauty and barber shops and photographic studios.

Amusement and recreational service establishments such as motion picture theaters.

Automobile repair and automobile service garages.

Advertising offices, consumer credit reporting, adjustment and collection agencies, printing and duplicating services, rental agencies and commercial testing laboratories.

G. It should be made clear that an air pollution watch, yellow alert, red alert and emergency can be declared on the basis of deteriorating air quality alone; an air stagnation advisory need not be in effect. The appropriate episode status should be declared by the Executive Secretary when any monitoring site records ambient air quality below that designated in the criteria.

The levels used to designate an air pollution emergency are those that pose an imminent and substantial endangerment to public health. Because these levels should not be permitted to occur, an air stagnation advisory should be declared when it appears that these levels may be reached.

H. Termination of Alerts

When in the judgement of the Executive Secretary meteorological conditions and pollutant concentrations are such to warrant discontinuance of any alert condition, he shall notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that the alert has been discontinued, and issue a public notice to that effect.

TABLE I

YELLOW ALERT PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan
1. Electric Power Generating Facilities	1a. Reduction of emission by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 PM.M to 4:00 P.M.)
	c. Reduction of emissions by diverting electric power generation to facilities outside of area for which the alert is called.
2. Process Steam Generating Facilities	2a. Reduction of emissions by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.)
	c. Reduction of steam load demands consistent with continuing the operation of the plant.
3. Manufacturing industries of the following (SIC) group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29	3a. Reduction of air contaminant emissions by curtailing, postponing, or deferring production and allied operations.
	b. Stop all trade waste disposal production which emit particles, gases, vapors or malodorous substances including incineration.
	c. Reduction of heat load demands for processing to a minimum.

Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries -Group 20	
4. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	4a. Reduction of air contaminant emissions by curtailing or deferring production and allied operations.
	b. Stop all trade waste disposal practices which emit particles, gases, vapors or malodorous substances including incineration.
	c. Reduction of heat load demands for processing to a minimum.
5. Private, public and commercial refuse disposal operations.	5a. Stop all open burning including disposal of diseased trees and burning at fire fighting schools, except as required for disposal of hazardous materials or other emergency needs.
	b. Operation of incinerators shall be limited to the hours between 10:00 A.M. and 2:00 P.M.
6. Transportation	6a. The unnecessary operation of any motor vehicle should be restricted.

TABLE II

RED ALERT PLAN OBJECTIVES

All Yellow ert plans shall be continued. In addition, the following steps shall be taken:

Air Contaminant Source	Requirements for Plan
1. Process steam generating facilities	1a. Maximum reduction of air contaminant emissions by utilization of fuels having

	the lowest ash and sulfur content.
	b. Maximum utilization of periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.) for soot blowing and boiler lancing.
	c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
2. Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemical and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries-Group 20	2a. Maximum reduction of air contaminant emission by, if necessary, postponing production and allied operations b. Maximum reduction of heat load demands for processing. c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a. Maximum reduction of air contaminant emissions by, if necessary, postponing production and allied operations.
4. Private, public and commercial refuse disposal operations.	4a. Stop operation of all incinerators.
5. Transportation	5a. Car pools and public transportation must be used in place of unnecessary motor vehicle operation.

TABLE III

AIR POLLUTION EMERGENCY PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan

All Yellow and Red Alert plans shall be continued. In addition, the following steps shall be taken:

1. Process steam generating facilities	1a. Maximum reduction of air contaminant emissions by reducing heat and steam load demands to values consistent with preventing equipment damage.
	b. Maximum utilization periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.) for soot blowing and boiler lancing.
2. Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, and Clay and Concrete Product Industries-Group 32 Primary Metal Industries-Group 33 Grain Industries-Group 23	2a. Elimination of air contaminant emission from the manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a. Elimination of air contaminant emissions from the manufacturing operations by ceasing, curtailing postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
	b. Maximum reduction of heat load demands for processing.
4. Private, public and commercial operations.	4a. The following places of employment, if notified by the Executive Secretary, shall immediately cease operations:

	1. Mining and quarrying operations. 2. Construction projects except as required to avoid emergent physical harm. 3. Manufacturing establishments except those required to have in force an air pollution alert plan. 4. Wholesale trade establishments. 5. Governmental units, except as required to implement the provisions of these regulations and other operations essential to immediate protection of the public welfare and safety. 6. Retail trade and service establishments except pharmacies, food stores and other similar operations providing for emergency needs. 7. Other commercial service operations such as those engaged in banking, insurance real estate, advertising, etc. 8. Educational institutions. 9. Amusement and recreational facilities.
5. Transportation	5a. Motor vehicles shall only be used for private and public emergency needs.

ST. LOUIS METROPOLITAN AREA REGULATIONS

(1.0) Regulation I DEFINITIONS

A. As used in these regulations, except as otherwise specifically provided in such regulations and except where the context indicates otherwise, the following words shall have the meaning ascribed to them in this regulation:

1. Approved source -- A source of fuel which has been found by the Executive Secretary, after such tests as he may require, to be in compliance with these regulations.

2. Existing -- Things, such as equipment, machines, devices, articles, contrivances or installations which are in being at the time these regulations become effective except that any such existing equipment, machine, device, article, contrivance or installation which is altered, repaired or rebuilt at a cost of 30 percent or more of its replacement cost shall be reclassified as "new", as defined in this regulation.

3. Multiple chamber incinerator -- Any article, machine, equipment, contrivance, structure or part of a structure, used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned, the refractories having a Pyrometric Cone Equivalent of 31, tested according to the method described in the American Society for Testing Materials, Method C-24-56.

4. New -- Things, such as equipment, machines, devices, articles, contrivances or installations built or installed on or after the effective date of these regulations, and things or installations existing at said stated time which are later altered, repaired or rebuilt at a cost of 30 percent or more of their replacement cost. The cost of installing equipment designed solely for the purpose of air pollution control is not to be considered a cost of altering, repairing or rebuilding existing equipment for the purpose of this definition.

5. Open burning -- The burning of any matter in such manner that the products of combustion resulting from the burning are emitted directly into the open atmosphere without passing through a stack, duct, or chimney.

6. Particulate matter -- Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

7. Residual fuel oil -- Fuel oil variously known as Bunker C, PS 400 and Number 6 as defined in ASTM D 396 487 (1959).

8. Process weight -- The total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

9. Refuse -- Any combustible waste material containing carbon in a free or combined state, other than liquids or gases.

10. Salvage operation -- Any business, trade, industry or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material such as metals or chemicals.

11. Smoke -- Small gas-borne particles resulting from combustion, consisting of carbon, ash, and other material.

12. Source operation -- The last operation preceding the emission of an air contaminant, which operation (a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion fuel; and (b) is not solely an air pollution abatement operation.

13. Standard conditions -- A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

14. Trade waste -- Solid, liquid or gaseous material, resulting from construction or the prosecution of any business, trade or industry, or any demolition operation including, but not limited to, plastics, cardboard cartons, grease, oil, chemicals and cinders.

15. St. Louis Metropolitan Area -- The geographical area comprised of St. Louis County, St. Charles County, Jefferson County, and the City of St. Louis.

16. ASTM -- American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania.

17. Source gas volume -- The volume of gas arising from a process or other source operation.

18. ASME -- American Society of Mechanical Engineers, 345 East 47th Street, New York, New York.

(51.5) Regulation II MAXIMUM ALLOWABLE EMISSION OF PARTICULATE MATTER FROM FUEL BURNING EQUIPMENT USED FOR INDIRECT HEATING

A. General Provisions

1. This regulation applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, or hot air or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels include those such as coal, coke, lignite, coke breeze, fuel oil, and wood, but do not include refuse. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

2. The heat content of coal shall be determined according to ASTM method D-271-64 Laboratory Sampling and Analysis of Coal and Coke or ASTM method D-2015-62T Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter, which publications are made a part of this regulation by reference.

3. For purposes of this regulation the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value used, shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel burning units at a plant or on a premise shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

4. The amount of particulate matter emitted shall be measured according to the American Society of Mechanical Engineers Power Test Codes - PTC - 27 dated 1957 and entitled Determining Dust Concentration in a Gas Stream, which publication is made a part of this regulation by reference. Any other method approved by the Executive Secretary may be used in accordance with good professional practice.

B. Provision Regardless of Stack Height

1. No person shall cause or permit the emission of particulate matter as measured in the flue which exceeds the following weights, as observable from Graph I:

   a. 0.60 pounds for each million B.T.U. per hour input if the equipment has a capacity rating of 10 million or less. If the capacity rating of the fuel burning equipment is more than 10 million, the amount of particulate matter which may be emitted for each million B.T.U. input shall decrease as the capacity rating of the fuel burning equipment increases as follows:

1. no more than 0.46 pounds for each million B.T.U. input from equipment having a capacity rating of 50 million;
2. no more than 0.40 pounds for each million B.T.U. input from equipment having a capacity rating of 100 million;
3. no more than 0.30 pounds for each million B.T.U. input from equipment having a capacity rating of 500 million;
4. no more than 0.26 pounds for each million B.T.U. input from equipment having a capacity rating of 1,000 million;
5. no more than 0.23 pounds for each million B.T.U. input from equipment having a capacity rating of 2,500 million;
6. no more than 0.20 pounds for each million B.T.U. input from equipment having a capacity rating of 5,000 million;
7. no more than 0.19 pounds for each million B.T.U. input from equipment having a capacity rating of 7,500 million;
8. no more than 0.18 pounds for each million B.T.U. input from equipment having a capacity rating of 10,000 million or more.

The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating shall be determined by linear interpolation. If two or more fuel burning units are connected to a single flue, the total capacity rating of all fuel burning units connected to the flue shall be the capacity rating for the purpose of computing the amount of particulate matter which may be emitted. If a single fuel burning unit is manifolded to two or more flues, the capacity rating of the single fuel burning unit shall be the capacity rating for the purpose of computing the amount of particulate matter which may be emitted.

C. Provision Considering Stack Height

1. For purposes of this regulation, stack height shall be as follows:

    a. Stack height, for purposes of Regulation II, is defined as the upward vertical distance from an elevation 600 feet above mean sea level to the location at which gases passing through the stack enter the atmosphere.

b. The provisions of subsection C.1(a) apply in cases wherein there is only one stack serving a plant or premise and to cases in which there is more than one stack, all of equal height. In cases involving more than one stack all of equal height, the stack height shall be the height of one of such stacks.

c. When a plant or premise has more than one stack and the stack heights are unequal, a weighted average stack height shall be used for purposes of determining maximum allowable emissions. This weighted average stack height shall be calculated in the following manner:

   1. Determine the heat input of each fuel burning unit (expressed in B.T.U. per hour). Add together the heat inputs of the units venting to each stack. If a single unit vents to more than one stack, prorate the B.T.U. input to each stack in proportion to exhaust gas flows.

   2. Determine the height of each stack, measured in feet.

   3. Multiply the total heat input of units vented through each stack as determined in (1) by the height of the stack to which discharged.

   4. Add together the values obtained from (3).

   5. Add together the heat input for all of the units of the plant or premise.

   6. Divide the sum obtained in step (4) by the sum obtained in step (5). The quotient (result) is the weighted average stack height expressed in feet.

2. Emission Limitations

   a. No person shall cause or permit the emission of particulate matter from fuel burning equipment used for indirect heating from any single stack or chimney in a quantity greater than 0.6 pounds per million B.T.U. of heat input to the equipment discharging to such stack or chimney.

   b. No person shall cause or permit the emission of particulate matter from any fuel burning installation used for indirect heating from any stack or chimney in excess of the quantity determined from the Graph II embodied in this regulation, as used in accordance with the following instructions:

      1. Determine the total heat input of the installation using provisions of subsection A-2 and A-3 of this regulation.

2. Determine the stack height for the installation using provisions of subsection C-1 of this regulation.

3. Locate a point representing the heat input of the installation on the scale of the graph marked "Total Capacity of Installation".

4. From the point located in step (3) draw a line across the graph perpendicular to the scale marked "Total Capacity of Installation".

5. Locate a sloping line on the graph which represents the stack height for the installation, as determined in step (2), interpolating between lines, if necessary. If stack height is less than 50 feet, use the line designated as 50 feet.

6. Locate the point where the line drawn in step (4) intersects the sloping stack height line selected in step (5).

7. Draw a line from the point located in step (6) perpendicular to the scale on the graph marked "Maximum Allowable Emission of Particulate Matter". The point where the line drawn intersects this scale is the value for the maximum allowable emission of particulate matter expressed in pounds of particulate matter per million B.T.U. of heat input.

8. If desired, the total maximum allowable emission of particulate matter expressed in pounds per hour may be obtained by multiplying the allowable emission value obtained in step (7) by the total heat input obtained in step (1).

9. The maximum allowable particulate matter emission rates determined in the manner prescribed in subsections C.2-b(1) through C.2-b(8) shall apply when all of the gases from indirect heating units at a plant or on a premise are discharged to the atmosphere from more than one stack, the maximum allowable particulate matter emission rate determined as prescribed in the said subsections shall be reduced by dividing the value obtained by using preceding provisions of this subsection C.2-a by a factor taken from the following list for the number of stacks involved:

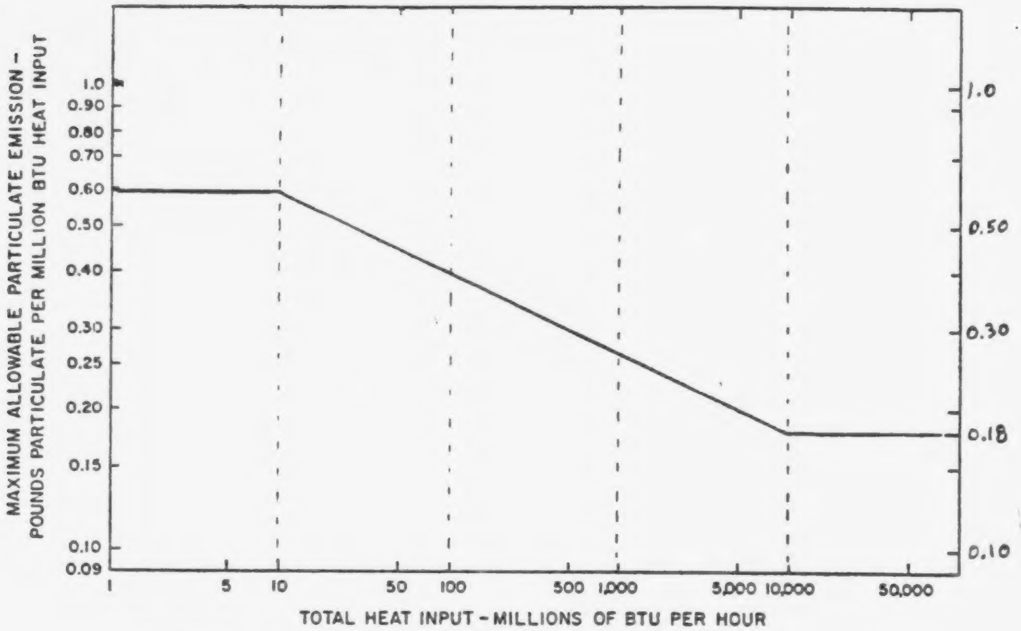
Number of stacks	Factor to be used to divide into the value obtained from use of subsections C.2-b(1) through C.2-b(8)
1	1.0
2	1.19
3	1.32
4	1.41
5	1.50
6 or more	1.56

c. Each installation having a total heat input rate of 5 million B.T.U. or more per hour shall be equipped with particulate matter emission control equipment which will remove at least 85 percent of the particulate matter in the gases arising from the installation and to be discharged to the atmosphere.

d. No person shall cause or permit the emission of any particles larger than 60 microns in diameter from any stack subject to provisions of this regulation.

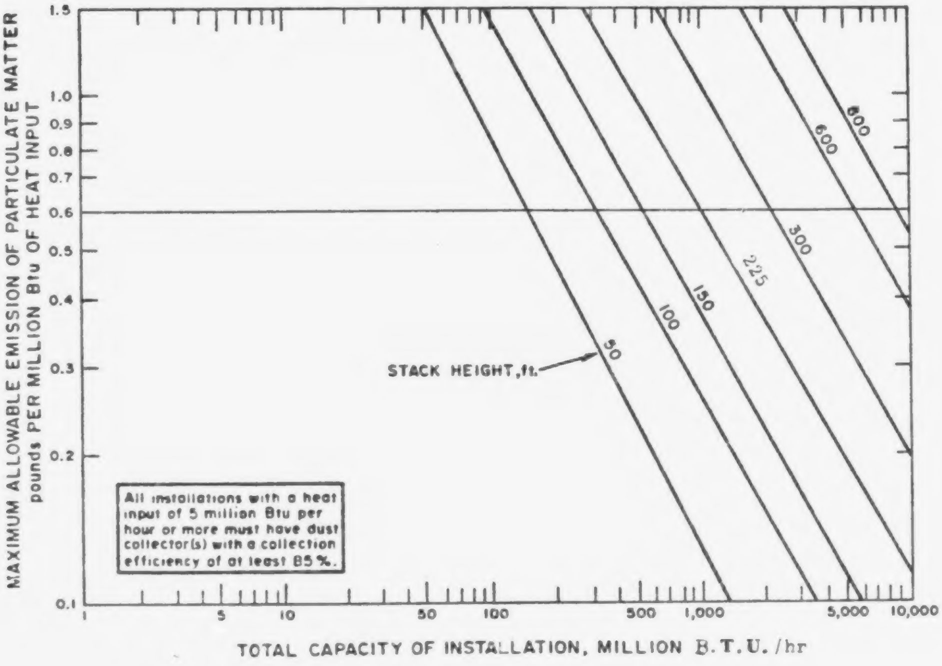
D. Procedure When More Than One Provision of This Regulation Applies

When two or more provisions of this regulation specify a maximum allowable particulate emission applicable in a particular case, the one resulting in the lowest total weight of emission of particulate matter to the atmosphere shall apply and the other shall not apply, except that subsections C.2(c) and C.2(d) shall apply in all cases.



Limitations on emission of particulate matter from fuel burning installations.

Graph I



All installations with a heat input of 5 million Btu per hour or more must have dust collector(s) with a collection efficiency of at least 85%.

Graph II

(51.5) Regulation III USE OF FUEL IN HAND-FIRED EQUIPMENT PROHIBITED

A. General

1. This regulation shall apply to all fuelburning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purposes, nor to fires used solely for the preparation of food by barbecuing.

2. Hand-fired fuel-burning equipment is any stove, furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

B. Prohibition

1. After three years from the effective date of this regulation, it shall, be unlawful to operate any hand-fired fuel burning equipment in the St. Louis, Missouri metropolitan area.

2. The Executive Secretary may order that any hand-fired fuel burning equipment not be used at any time earlier than three years from the adoption of this regulation whenever such equipment has been found in violation of any air contaminant emission regulation on three or more occasions in any six months period.

(50.1.1) Regulation IV RESTRICTION OF EMISSION OF PARTICULATE MATTER FROM INDUSTRIAL PROCESSES

A. General Provisions

1. This regulation applies to any operation, process, or activity except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials and except the burning of refuse and except the processing of salvageable material by burning.

2. Process weight means the total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

   Process weight rate means a rate established as follows:

a. For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

b. For cyclical or batch source operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this section, that interpretation which results in the minimum value for allowable emission shall apply.

3. Emission tests relating to this regulation shall be made following the standards in American Society of Mechanical Engineers Power Test Codes-PTC - 27 dated 1957 and entitled Determining Dust Concentration in a Gas Stream.

B. Emission Limitations

1. Except as provided for in Section B (2), no person shall cause, suffer, allow, or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in Table I for the process weight allocated to such source.

2. The limitations established by Section B (1) shall not require the reduction of particulate matter concentration, based on the source gas volume, below the concentration specified in Table 2 for such volume; provided that, for the purposes of this section the person responsible for the emission may elect to substitute a volume determined according to the provisions of Section B (3); and provided further that the burden of showing the source gas volume or other volume substituted therefor, including all the factors which determine such volume and the methods of determining and computing such volume, shall be on the person seeking to come within the provisions of this Section.

3. Any volume of gases passing through and leaving an air pollution abatement operation may be substituted for the source gas volume of the source operation served by such air pollution abatement operation, for the purposes of Section B (2), provided such air pollution abatement operation emits no more than 40 percent of the weight of particulate matter entering thereto; and provided further that such substituted volume shall be corrected to standard conditions and to a moisture content no greater than that of any gas stream entering such air pollution abatement operation.

4. No person shall cause, suffer, allow, or permit the emission of particulate matter from any source in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gases. If provisions of this subsection would permit a greater emission of particulate matter per hour than allowed by subsection B(1), the provision of this subsection (B-4) shall not apply except that the following regulation shall apply to existing grey iron jobbing cupolas. For purposes of this regulation, a jobbing cupola is defined as a cupola which has a single melting cycle no more than 10 hours in any consecutive 24 hours and no more than 50 hours in any consecutive 7 days.

    a. All existing grey iron jobbing cupolas shall be equipped with gas cleaning devices and so operated as to remove 85% by weight of all the particulate matter in the cupola discharge gases, or release not more than 0.4 grain of particulate matter per standard cubic foot of discharge gas, whichever is more stringent.

    b. All gases, vapors, and gas entrained effluents from such cupolas shall be incinerated at a temperature not less than 1200° Fahrenheit for a period of not less than 0.3 second.

    c. Exception. The following exceptions to the provisions of Regulation IV shall be permitted:

        1. When building a new fire, and

        2. During the startup, an operational breakdown, or while cleaning air pollution control equipment for any process.

TABLE I

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.38	60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E-4.10\ P^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation: $E - 55.0P^{0.11}-40$, where E = rate of emission in lb/hr and P = process weight rate in tons/hr.

TABLE 2

Source Gas Volume, SCFM[a]	Concentration GR/SCF[b]	Source Gas Volume, SCFM[a]	Concentration GR/SCF[b]
7,000 or less	0.100	140,000	0.038
8,000	0.096	160,000	0.036
9,000	0.092	180,000	0.035
10,000	0.089	200,000	0.034
20,000	0.071	300,000	0.030
30,000	0.062	400,000	0.027
40,000	0.057	500,000	0.025
50,000	0.053	600,000	0.024
60,000	0.050	800,000	0.021
80,000	0.045	1,000,000 or more	0.020
100,000	0.042		
120,000	0.040		

[a] Standard cubic foot per minute

[b] Grain per standard cubic foot

(51.5) Regulation V REFUSE NOT TO BE BURNED IN FUEL BURNING INSTALLATIONS

No person shall burn or cause or permit the burning of refuse in any installation which is designed for the primary purpose of burning fuel.

(51.13) Regulation VI OPEN BURNING RESTRICTIONS

A. Refuse Burning Restrictions

1. No person shall dispose of refuse by open burning, or cause, suffer, allow or permit open burning of refuse.

2. In areas where no public or commercial refuse collection service is available on the effective date of this regulation, the open burning of refuse on residential premises, of refuse originating in dwelling units on the same premises, shall not be in violation of this regulation until such refuse collection service becomes available or until 3 years from the effective date of this regulation, whichever is sooner.

3. Regardless of provisions of subsections A(1) and A(2) of this regulation, open burning on residential premises of refuse originating in dwelling units on the same premises shall not be a violation of this regulation in areas of low population density. The Executive Secretary, after consultation with public agencies concerned with refuse collection and disposal, shall select and publish the specific boundaries of areas in which such open burning of refuse will not be in violation of this regulation. In selecting such areas, he shall use a density of 100 dwelling units or less per square mile as an approximate definition of areas of low population density and he shall give due consideration to the desirability of having restrictive air pollution control regulations within the conterminous area comprising the St. Louis metropolitan area air pollution basin. The Executive Secretary shall select and publish revised boundaries, as described above, from time to time as population density changes.

4. Any open burning of refuse permitted by subsection A(2) or A(3) of this regulation shall be permitted only between the hours of 10:00 A.M. and 4:00 P.M.

B. Prohibition of Salvage Operations by Open Burning

No person shall conduct or cause or permit the conduct of a salvage operation by open burning.

C. Restrictions on Open Burning of Trade Wastes

1. No person shall cause or permit the disposal of trade wastes by open burning, except as provided in subsection C(2) of this regulation.

2. The open burning of trade wastes may be permitted when it can be shown by a person that such open burning is absolutely necessary and in the public interest. Any person intending to engage in open burning of trade wastes shall file a request to do so with the Executive Secretary.

   The application shall state the following:

   a. The name, address, and telephone number of the person submitting the application.

   b. The type of business or activity involved.

   c. A description of the proposed equipment and operating practices, the type, quantity, and composition of trade wastes to be burned, and the expected composition and amount of air contaminants to be released to the atmosphere.

d. The schedule of burning operations.

e. The exact location where open burning will be used to dispose of trade waste.

f. Reasons why no method other than open burning can be used for disposal of trade waste.

g. Evidence that the proposed open burning has been approved by any fire department which may have jurisdiction. Upon approval of the application by the Executive Secretary, the person may proceed with the operation without being in violation of subsection C(1).

D. Restrictions on Open Burning of Agricultural Wastes

1. The burning of plant life is prohibited. Provided that the opening burning of plant life grown on the premises in the course of any agricultural operation may be permitted when it can be shown that such open burning is necessary and that no fire hazard will occur, any person intending to dispose of plant life by open burning shall file a request to do so with the Executive Secretary on forms provided by him. Such form shall require the provision of such information as the Executive Secretary shall reasonably need to determine the air pollution aspects of the situation and whether the request should be granted. The applicant shall furnish the Executive Secretary evidence that the proposed open burning has been approved by any fire department which may have jurisdiction. Upon approval of the application by the Executive Secretary, the person may proceed with the operation without being in violation of this subsection.

2. Any open burning permitted under provisions of subsection D(1) of this regulation shall be permitted only between the hours of 10:00 A.M. and 4:00 P.M. and only at times when the actual or forecast surface wind speed, as given by the local U.S. Weather Bureau is 5 miles per hour or greater.

E. Restriction on Open Burning of Tree Leaves

1. The open burning of leaves is prohibited except between the hours of 10:00 A.M. and 4:00 P.M.

2. All open burning of leaves shall be prohibited after September 30, 1968 except in areas of low population density. Such areas of low population density shall be specified by the Executive Secretary in the same manner as described in subsection A(3) of this regulation.

(51.9) Regulation VII INCINERATORS

1. This regulation shall apply to any incinerator used to dispose of refuse or other wastes by burning and the processing of salvageable material by burning. Notwithstanding definitions in other regulations, as used in this regulation the word refuse includes garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, and other wastes. The word incinerator, as used in this regulation, includes incinerators and other devices, structures, or contrivances used to burn refuse (as defined herein) or to process refuse by burning.

2. The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Executive Secretary in accordance with good engineering practice. In case of conflict, the findings of the Executive Secretary shall govern.

3. The amount of particulate matter emitted from any incinerator shall be determined according to the American Society of Mechanical Engineers Power Test Codes - PTC - 27 dated 1957 and entitled Determining Dust Concentration in a Gas Stream. This publication is hereby made a part of this regulation by reference. In calculating the amount of particulate matter in stack gas, the loading shall be adjusted to 12 percent carbon dioxide in the stack gas. The carbon dioxide produced by burning of any liquid or gaseous fuel in the incinerator shall be excluded from the calculation to 12 percent carbon dioxide. Emission shall be measured when the incinerator is operating at its maximum capacity or at any other burning rate during which emission of particulate matter is greater.

B. Restriction of Emissions of Particulate Matter from Incinerators

1. No person shall cause or permit the emission of particulate matter from the stack or chimney of any incinerator in excess of the following:

   a. Incinerators with a maximum refuse burning capacity of 200 or more pounds per hour, 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas.

   b. All other incinerators, 0.3 grains of particulate matter per standard dry cubic foot of exhaust gas.

2. No incinerator shall be used for the burning of refuse unless such incinerator is a multiple chamber incinerator may be altered, modified or rebuilt as may be necessary to meet this requirement. The Executive Secretary may approve any other alteration

or modification to an existing incinerator if such be found by him to be equally effective for the purpose of air pollution control as a modification or alteration which would result in a multiple chamber incinerator. All new incinerators shall be multiple chamber incinerators, provided that the Executive Secretary may approve any other kind of incinerator if he finds in advance of construction or installation that such other kind of incinerator is equally effective for purposes of air pollution control as an approved multiple chamber incinerator.

Existing incinerators which are not multiple chamber incinerators and do not otherwise meet the requirements of Section B(1) of this regulation shall be modified or rebuilt in compliance with this section in accordance with the following schedule:

Rated Capacity	Latest Date for Compliance
2,000 lbs/hr. or above	12 months from effective date of regulation
1,000 - 1999 lbs/hr.	18 months from effective date of regulation
500 - 999 lbs/hr.	24 months from effective date of regulation
All Others	30 months from effective date of regulation.

C. Exceptions for Low Population Density Areas

The provisions of subsections B(1) and B(2) of this regulation shall not apply to any incinerator on residential premises used to burn refuse arising from domestic activities on the same premises in areas of low population density. The Executive Secretary shall select and publish the specific boundaries of areas in which subsections B(1) and B(2) of this regulation do not apply. In selecting such areas, he shall use a density of 100 dwelling units or less per square mile as an approximate definition of areas of low population density and he shall also give due consideration to the desirability of having restrictive air pollution control regulations within the conterminous area comprising the St. Louis metropolitan area air pollution basin. The Executive Secretary shall select and publish revised boundaries, in the manner described in the foregoing, from time to time as population density changes.

D. Permitted Hours of Operation

No person shall operate or cause or permit the operation of any incinerator at any time other than between the hours of 10:00 A.M. and 4:00 P.M. This restriction shall not apply to incinerators having a refuse burning capacity of five tons per hour or more.

(50.1.2) Regulation VIII RESTRICTION OF EMISSION OF VISIBLE AIR CONTAMINANTS

A. Restrictions Applicable to Existing Installations

No person shall discharge into the atmosphere from any single source of emission whatsoever any air contaminant.

1. of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart, or
2. of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection A(1) of this regulation.

This section A shall not apply to existing incinerators.

B. Restrictions Applicable to New Installations and All Incinerators

No person shall discharge into the atmosphere from any single source of emission whatsoever any air contaminant

1. of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or
2. of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection B(1) of this regulation.

C. Exceptions

A person may discharge into the atmosphere from any single source of emission for a period or periods aggregating not more than six minutes in any sixty minutes air contaminants.

1. of a shade or density not darker than No. 2 on the Ringelmann Chart, or
2. of such opacity as to obscure an observer's view to a degree not greater than does smoke described in subsection C(1) of this regulation.
3. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of Sections A or B of this regulation, such sections shall not apply.

4. The provisions of Section A of this regulation shall not apply to the following:

   a. Transfer of molten metals
   b. Emissions from transfer ladles
   c. Coke ovens when pushing coke from oven
   d. Water quenching of coke on discharge from ovens
   e. Existing grey iron jobbing cupolas as defined in Regulation IV.

D. Method of Measurement

1. The Ringelmann Chart published and described in the U.S. Bureau of Mines Information Circular 7718 or the U.S. Public Health Service Smoke Inspection Guide as described in the Federal Register, Title 42, Chapter 1, Subchapter F, Part 75, shall be used in grading the shade or opacity of visible air contaminant emissions. The Executive Secretary may specify other means of measurement which give comparable results or results of greater accuracy. The two publications described in this subsection are hereby made a part of this regulation by reference.

(50.1) Regulation IX PREVENTING PARTICULATE MATTER FROM BECOMING AIR-BORNE

A. No person shall cause or permit the handling or transporting or storage of any material in a manner which allows or may allow unnecessary amounts of particulate matter to become air-borne.

B. No person shall cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne. The Executive Secretary may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne including but not limited to paving or frequent cleaning of roads, driveways and parking lots; application of dust-free surfaces; application of water; and the planting and maintenance of vegetative ground cover.

(50.2) Regulation X RESTRICTION OF EMISSIONS OF SULFUR DIOXIDE FOR USE OF FUEL

A. General Provisions

1. This regulation shall apply to any installation in which fuel is burned and in which the sulfur dioxide emission is substantially due to the content of the fuel burned, and in which the fuel is burned primarily to produce heat.

2. For purposes of this regulation, a fuel burning installation is any single fuel burning furnace or boiler or other unit, device, or contrivance in which fuel is burned or any grouping of two or more such furnaces or boilers or other units, devices, or contrivances on the same premises or otherwise located in close proximity to each other and under control of the same person. The capacity of such installations shall be the manufacturer's or designer's guaranteed maximum heat input rate.

3. The method for determining the percent of sulfur in coal shall be that described in ASTM D-271-64 Laboratory Sampling and Analysis of Coal and Coke or equivalent method approved by the Executive Secretary. The method for determining the heat content of coal shall be as described in ASTM D-271-64 Laboratory Sampling and Analysis of Coal and Coke or D-2015-62T Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter. Sulfur content of coal as stated in this regulation shall be as analyzed on a dry basis, but calculated to include normal moisture.

   The method for determining the sulfur content of fuel oil shall be that described in ASTM D-129-64 Standard Method of Test for Sulfur in Petroleum Products and Lubricants by the Bomb Method.

   The method for determining the heat content of fuel oil shall be that described in ASTM D-240-64 Standard Method of Test for Heat of Combustion of Liquid Hydrocarbons by Bomb Calorimeter or other method giving comparable results.

   The testing methods specified in this subsection are hereby made a part of this regulation by reference.

4. The Executive Secretary is authorized to take or cause to have taken samples of any fuel by any appropriate means, in any quantity which he finds necessary, at any reasonable time or place, for purposes of determining compliance with this regulation. Where applicable, the following methods will be used:

For coal:	ASTM D-492-48 (1958) Sampling Coal Classified According to Ash Content ASTM D-2013-65T Preparing Coal Sample for Analysis ASTM D-2234-65T Mechanical Sampling of Coal
For oil:	ASTM D-270-65T Sampling Petroleum and Petroleum Products

   The methods specified in this subsection are hereby made a part of this regulation by reference.

B. Restrictions Applicable to Fuel Burning Installations With a Capacity of 2,000 Million or More British Thermal Units Per Hour

1. After three (3) years from effective date of this regulation, no persons shall cause or permit the emission of sulfur dioxide to the atmosphere from any fuel burning installation with a capacity of 2,000 million or more British Thermal Units per hour in an amount greater than 2.3 pounds of sulfur dioxide per million British Thermal Units of heat input to the installation.

2. On and after the effective date of this regulation and until the requirements of subsection B(1) of this regulation are met, no fuel burning installation with a capacity of 2,000 million or more British Thermal Units per hour shall burn a fuel or fuels having a higher average sulfur content than the fuel or fuels used in such installation during the 12 months prior to the effective date of this regulation based on a comparable B.T.U. content. For purposes of determining compliance with this subsection, the average sulfur content of all fuel or fuels used for the 12 month period prior to the effective date of this regulation shall be determined by averaging the sulfur content of all fuel used during such period, on the basis of pounds of sulfur per million British Thermal Units heating value of the fuel or fuels. This computed average sulfur content shall not be exceeded during any 12 month period after the effective date of this regulation, when determined on the same averaging basis.

   Persons responsible for installations subject to Section B of this regulation shall furnish the Executive Secretary such data as he may reasonably require to determine whether an installation is being operated in compliance with this subsection of this regulation.

C. Restrictions Applicable to Fuel Burning Installations with A Capacity of Less Than 2,000 Million British Thermal Units Per Hour

1. During the months of December, 1968 and January, 1969 no person shall burn or permit the burning of any coal containing more than 2.0 percent sulfur or of any fuel oil containing more than 2.0 percent sulfur, in any fuel burning installation having a capacity of less than 2,000 million British Thermal Units per hour.

2. During the months of November and December, 1969 and January and February, 1970 no person shall burn or permit the burning of any coal containing more than 2.0 percent sulfur or of any fuel oil containing more than 2.0 percent sulfur in any fuel burning installation having a capacity of less than 2,000 million British Thermal Units per hour.

3. During the months of October, November and December of 1970 and January, February and March of 1971 and every year thereafter, no person shall burn or permit the burning of any coal containing more than 2.0 percent sulfur or of any fuel oil containing more than 2.0 percent sulfur in any fuel burning installation having a capacity of less than 2,000 million British Thermal Units per hour.

4. Subsections 1, 2 and 3 of this section C shall not apply to any fuel burning installation if it can be shown that emissions of sulfur dioxide from such installation into the atmosphere will not exceed 2.3 pounds per million B.T.U. of heat input to the installation.

D. Unlawful Conduct

It shall be unlawful for any person to import, sell, offer for sale, expose for sale, exchange, deliver or transport for use and consumption in the St. Louis metropolitan area or to use or consume in said area any fuel which is not from an approved source or which does not meet the requirements of this regulation unless it is shown by any such person that emission of sulfur dioxide from use of such fuel will not exceed 2.3 pounds of sulfur dioxide per million British Thermal Units of heat input to the installation in which it is to be burned.

(2.0) Regulation XI INFORMATION ON SALES OF FUELS TO BE PROVIDED AND MAINTAINED

A. Tickets to Be Furnished and Retained

After thirty days from the effective date of these regulations, every delivery of coal or residual fuel oil when first delivered to a consumer or wholesaler in the St. Louis metropolitan area must be accompanied by a ticket prepared in triplicate and containing at least the name and address of the seller and the buyer and the source of the fuel. Tickets on delivery of coal shall also show the ash content of the coal. One copy of each ticket shall be kept by the person delivering the fuel and be retained for one year; one copy is to be given to the recipient of the fuel to be retained for one year; and upon request, within 30 days after delivery of the fuel, the delivering party shall mail one copy to the Air Conservation Commission.

B. Lists May Be Published

The Executive Secretary is authorized to publish lists of approved sources or other descriptive lists of fuels available in the area which meet the requirements of these regulations.

(51.6) Regulation XII CERTAIN COALS TO BE WASHED

A. Certain Coals to Be Washed

After December 1, 1968, it shall be unlawful for any person to import, sell, offer for sale, expose for sale, exchange, deliver or transport for use or consume in the said area any coal which as mined contains in excess of 2.0 percent sulfur or 12.0 percent ash calculated as described in Regulation X, unless it shall have been cleaned by a process known as "washing" so that it shall contain no more than 12.0 percent ash on a dry basis. The term "washing" is meant to include purifying, cleaning, or removing impurities from coal by mechanical process, regardless of cleaning medium used.

B. Samples May be Taken

The Executive Secretary is authorized to take or cause to be taken samples of any coal at any reasonable time or place for purposes of determining compliance with this regulation.

C. Exception

This regulation shall not apply if a person proposing to use unwashed coal can show that the emission of sulfur dioxide from the plant in which the coal is to burned will not exceed 2.3 pounds of sulfur dioxide per million B.T.U.'s of heat input to the installation and that emission of particulate matter will be no more than that allowed in Regulation II.

(50.7) Regulation XIII EMISSION OF CERTAIN SETTLEABLE ACIDS AND ALKALINE SUBSTANCES RESTRICTED

A. General Provisions

This regulation shall apply to all emissions from any source or any premises.

B. Method of Measurement

1. The fallout sampling devices used in determining compliance with this regulation shall consist of circular glass dishes 15 centimeters in diameter. The dishes shall be supported on a nearly horizontal surface not larger than the dish. The dish bottom shall be at least 3 feet above the earth or other surface on which its support is resting. The dish shall be coated with a solution of thymol blue, ammonia water solution and gelatin dried to a yellow color in a vacuum oven at room temperature. Prepared dishes shall be stored in a desiccator at 40 percent relative humidity, or in plastic bags.

2. Fallout sampling devices shall be put in place at one or more locations upwind and downwind of a premises at locations beyond the premises on which a source or sources are located. They shall be left exposed to substances settling out of the ambient air for a period of one hour. The presence of red-colored spots on the gelatin in samplers used to measure fallout of acidic substances shall be construed to mean that acidic substances have settled out of the air. The presence of blue-colored spots on the gelatin in samplers used to measure fallout of alkaline substances shall be construed to mean that alkaline substances have settled out of the air. The number of spots visible on samplers exposed upwind of a premises is to be subtracted from the number of spots visible on samplers exposed downwind of the same premises. The difference in the number of spots, if any, shall be construed to be attributable to emissions occurring on the premises under investigation.

3. In lieu of the test methods specified in B(1) and B(2) any other method approved by the Executive Secretary may be used.

C. Emissions Restricted

No person shall cause or permit the emission from any source or premises of substances having acidic or alkaline properties in such amounts that the downwind fallout rate of acidic or alkaline substances at any place where an adverse effect could occur, exceeds the upwind fallout rate by five or more spots per hour, measured in the manner prescribed in Section B of this regulation.

(50.2) Regulation XIV EMISSION OF CERTAIN SULFUR COMPOUNDS RESTRICTED

A. General Provisions

1. Section B of this regulation shall apply to all emissions except those in which both

    a. fuel is burned primarily to produce heat, and

    b. the sulfur compound emission is due primarily to the sulfur in the fuel burned.

2. Section C and D shall apply to all emissions from any source or sources whatsoever.

3. The method of measuring sulfur trioxide and sulfuric acid or any combination thereof in stack gases shall be:

   Particulates (H_2SO_4 - Acid Mists)

   Atmospheric Emissions from Sulfuric Acid Manufacturing Processes, Ref. Public Health Service Publication 999-AP-13 (1965), Appendix B, Page 61-6
   (Modified Monsanto Company Method)[a]

   Gaseous (SO_3)-SO_2)

   Atmospheric Emissions from Sulfuric Acid Manufacturing Processes, Ref. Public Health Service Publication 999-AP-13 (1965) Appendix B, Page 85-7
   (Shell Development Company Method)[b]

4. The method of measuring hydrogen sulfide in the ambient atmosphere shall be:

   Lead-Acetate-Impregnated Filter Paper Procedure

   Ref. Sensenbaugh, J.D., and Hemeon, W.C.L.: A Low Cost Sampler for Measurement of Low Concentration of Hydrogen Sulfide. Air Repair 4:5 (May 1594)

5. The method of measuring sulfur dioxide in stack gases shall be:

   Gaseous (SO_3-SO_2)

   Atmospheric Emissions from Sulfuric Acid Manufacturing Processes, Ref. Public Health Service Publication 999-AP-13 (1965), Appendix B, Page 85-7.
   (Shell Development Company Method)[b]

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[a] Secondary reference for industrial emission sampling and analysis for particulates, (sulfuric acid-acid mists), Patton. W.F. and Brink, J.A., New Equipment and Techniques for Sampling Chemical Process Cases. J. Air Pollution Control Association 13, 162-66 (April 1963).

[b] Secondary reference for industrial emission sampling and analysis for gases (sulfur trioxide and sulfur dioxide) Determination of Sulfur Dioxide and Sulfur Trioxide in Stack Gases, Emeryville Method Ser. 4S16/59a. Anal. Department Shell Development Company, Emeryville, Calif. (1959).

6. The method of measuring sulfur trioxide and sulfuric acid or any combination thereof suspended in the ambient atmosphere shall be:

   Particulates (H_2SO_4)

      Ref. Commons, B. T., Determination of Particulate Acid in Town Air, Analyst, 88, 364-67 (May 1963)

7. The method of measuring sulfur dioxide in the ambient atmosphere shall be:

   Gaseous (SO_2) colorimetric

      Ref. Selected Methods for the Measurement of Air Pollutants Public Health Service Publication No. 999-AP-11 (May 1965) Determination of Sulfur Dioxide: West -- Gaeke Method, Page A1-5

   Gaseous (SO_2) conductometric

      ASTM Standards on Methods of Atmospheric Sampling and Analysis, 2nd Edition, Method D 1355-60, Method A, Page 11.

8. Other test methods approved by the Executive Secretary may be used. The publications describing methods of measurement specified in this section are hereby made a part of this regulation by reference.

B. Concentration of Sulfur Compounds in Emissions Restricted

1. No person shall cause or permit the emission into the atmosphere from any existing source specified in subsection A(1) of this regulation, gases containing more than 2000 parts per million by volume of sulfur dioxide or 500 parts per million by volume of sulfur dioxide from any new source.

2. No person shall cause or permit the emission into the atmosphere from any source specified in subsection A(1) of this regulation, gases containing more than 70 milligrams per cubic meter of sulfuric acid or sulfur trioxide or any combination thereof or 35 milligrams per cubic meter of sulfuric acid, sulfur trioxide or any combination thereof from any new source (expressed as sulfuric acid).

C. Emission of Sulfur Compounds in Certain Amounts and Manner Restricted

1. No person shall cause or permit the emission of sulfur dioxide from any premises in such manner and amounts that the concentrations and frequencies attributable to such emission exceed those shown in the following table in the ambient air at any occupied place beyond the premises on which the source is located:

Concentration[a]	Averaging Time	Maximum Allowable Frequency
0.25 ppm or more	5 minutes	Once in any 8 hours
0.10 ppm or more	1 hour	Once in any 4 days
0.05 ppm or more	24 hours	Once in any 90 days

2. No person shall cause or permit the emission of sulfuric acid or sulfur trioxide or any combination thereof from any premises in such manner and amounts that the concentrations and frequencies attributable to such emission exceed those shown in the following table in the ambient air at any place where people live, work or congregate beyond the premises on which the source is located.

Concentration[a] of Sulfuric Acid or Sulfur Trioxide or any combination thereof	Averaging Time	Maximum Allowable Frequency
0.03 mg/m3 or more	30 minutes or more	Once in any 48 hours
0.01 mg/m3 or more	24 hours	Once in any 90 days

3. No person shall cause or permit the emission of hydrogen sulfide from any premises in such manner and amounts that the concentrations attributable to such emissions in the ambient air at any occupied place beyond the premises on which the source is located exceed a concentration of 0.03 parts per million by volume for any averaging period of 30 or more minutes on more than two occasions in any 5 consecutive day period, or 0.05 parts per million by volume for any averaging period 30 or more minutes more than two times per year.

D. More Restrictive Limitations to Apply

In any situation in which more than one requirement of this regulation is applicable, the most restrictive provision shall govern.

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[a] parts per million by volume.

[a] Milligrams per cubic meter at standard conditions, measured and calculated as sulfuric acid.

(50.6) Regulation XV CONTROL OF ODORS IN THE AMBIENT AIR

A. No person shall emit odorous matter such as to cause an objectionable odor

1. on or adjacent to residential, recreational, institutional, retail sales, hotel or educational premises,

2. on or adjacent to industrial premises when air containing such odorous matter is diluted with 20 or more volumes of odor-free air,

3. on or adjacent to premises other than those in 1 and 2 when air containing such odorous matter is diluted with four or more volumes of odor-free air.

B. The above requirement shall apply only to objectional odors. An odor will be deemed objectionable when 30 percent or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy, the sample size to be at least 20 people or 75 percent of those exposed if fewer than 20 people are exposed.

(51.21) Regulation XVI CONTROL OF ODORS FROM PROCESSING OF ANIMAL MATTER

A. General

1. For purposes of this regulation the word "reduction" is defined as any heated process, including rendering, cooking, drying, dehydrating, digesting, evaporating, and protein concentrating. Animal matter is defined as any product or derivative of animal life.

2. The provisions of this regulation shall not apply to any device, machine, equipment or other contrivance used exclusively for the processing of food for human consumption in food service establishments.

   For purposes of this regulation a food service establishment shall be defined as follows: Any fixed or mobile restaurant; coffee shop; cafeteria; short order cafe; luncheonette; grill; tearoom; sandwich shop; soda fountain; tavern; bar; cocktail lounge; night club; roadside stand; industrial feeding establishment; private, public or nonprofit organization or institution routinely serving food, catering kitchen, commissary, or similar place in which food or drink is placed for sale or for service on the premises or elsewhere; and any other eating or drinking establishment or operation where food is served or provided for the public with or without charge.

B. Odor Control Equipment Required on Reduction Processes

1. No person shall operate or use any device, machine, equipment or other contrivance for the reduction of animal matter unless all gases, vapors, and gas-entrained effluents from such facility are incinerated at a temperature of not less than 1200 degrees Fahrenheit for a period of not less than 0.3 second, or processed in such manner as determined by the Executive Secretary to be equally or more effective for the purpose of air pollution control.

A person incinerating or processing gases, vapors or gasentrained effluents pursuant to this rule shall provide, properly install and maintain, in good working order and in operation, devices as specified by the Executive Secretary for indicating temperature, pressure, or other operating conditions.

C. Other Odor Control Measures Required

1. Effective devices and/or measures shall be installed and operated such that no vent, exhaust pipe, blow-off pipe or opening of any kind shall discharge into the outdoor air any odorous matter, vapors, gases, or dusts or any combination thereof which create odors or other nuisances in the neighborhood of the plant.

2. Odor producing materials shall be stored and handled in a manner such that odors produced from such materials are confined. Accumulation of odor producing materials resulting from spillage or other escape is prohibited.

3. Odor bearing gases, vapors, fumes, or dust arising from materials in process shall be confined at the point of origin so as to prevent liberation of odorous matter. Confined gases, vapors, fumes, or dusts shall be treated before discharge to the atmosphere as required in subsection C(1).

D. Enclosure of Building May Be Required

Whenever dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building used for processing of animal matter in such manner and amount as to cause a violation of Regulation XV, the Executive Secretary may order that the building or buildings in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas-borne material leaving the building are treated by incineration or other effective means for removal or destruction of odorous matter or other air contaminants before discharge into the open air.

(12.0) (50.1.2) Regulation XVII EMISSION OF VISIBLE AIR CONTAMINANTS FROM INTERNAL COMBUSTION ENGINES

A. No person shall cause or permit the emission of visible air contaminants from any internal combustion engine for more than 10 consecutive seconds at any one time.

B. When the presence of uncombined water is the only reason for failure of an emission to meet the requirements of this regulation, the provisions of this regulation shall not apply.

(2.0) Regulation XVIII APPROVAL OF PLANNED INSTALLATIONS

A. Definitions:

1. Commenced -- an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a binding agreement or contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

2. Construction -- fabrication, erection, or installation.

3. Modification -- any physical change in, or change in method of operation of, an air contaminant source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.

4. Startup -- the setting in operation of a source for any purpose.

5. Owner or operator -- any person who owns, leases, operates, controls or supervises an air contaminant source.

B. General

1. No owner or operator shall commence construction or modification of any air contaminant source after the effective date of this regulation without first obtaining a permit from the Executive Secretary.

2. Each application for a construction permit shall be accompanied by site information, plans, descriptions, specifications, and drawings showing the design of the source, the nature and amount of emissions, and the manner in which it will be operated and controlled.

3. Any additional information, plans, specifications, evidence or documentation that the Executive Secretary may require shall be furnished upon request.

4. The Executive Secretary shall determine if the ambient air quality standards in the vicinity of the source are being exceeded, and shall determine the impact on the ambient air quality standards from the source prior to granting a permit to construct or modify. No permit to construct or modify shall be issued if it is determined that the proposed source will prevent the attainment or maintenance of ambient air quality standards, or violate any of the regulations pursuant to Chapter 203, RSMo.

5. Upon receipt of an application, the Executive Secretary shall act promptly, and shall notify the applicant in writing of his approval, conditional approval, or denial of the application. The Executive Secretary will set forth his reasons for any denial.

6. The Executive Secretary may impose any reasonable conditions, upon a permit, including conditions requiring the source to be provided with:

    a. Sampling ports of a suitable size, number and location,

    b. Safe access to each port,

    c. Instrumentation to monitor and record emission data, and

    d. Other sampling and testing facilities.

7. A permit may be cancelled if construction or modification work is not begun within two (2) years from the date of issuance, or if work is suspended for one (1) year.

8. Any owner or operator subject to the provisions of this regulation shall furnish the Executive Secretary written notification as follows:

    a. A notification of the anticipated date of initial startup of source not more than 60 days or less than 30 days prior to such date.

    b. A notification of the actual date of initial startup of a source within 15 days after such date.

9. Within 60 days after achieving the maximum production rate at which the source will be operated, but not later than 180 days after initial startup of such source, the owner or operator of such source shall conduct performance test(s) in accordance with methods and under operating conditions approved by the Executive Secretary and furnish the Executive Secretary a written report of the results of such performance test.

a. Such tests shall be at the expense of the owner or operator.

b. The Executive Secretary may monitor such tests and may also conduct performance tests.

c. The owner or operator of a source shall provide the Executive Secretary 15 days prior notice of the performance test to afford the Executive Secretary the opportunity to have an observer present.

10. Approval to construct shall not relieve any owner or operator of the responsibility to comply with other local, state and federal regulations.

C. Exceptions:

1. Fuel burning equipment which use gas or oil or grade #3 or lighter for space heating, air conditioning, or heating water; is used in a private dwelling; or has a heat input as specified by the manufacturer or designer of less than 350,000 BUT's per hour.

2. Mobile internal combustion engines.

3. The construction of a private residence.

4. Portable equipment including, but not limited to rock crushers, asphalt plants, and concrete batching plants shall be exempted from the requirements of this regulation after an initial permit has been obtained, provided that:

   a. Each new location is reported to the Executive Secretary as early as possible, but in no case later than fourteen (14) days prior to ground breaking or initial equipment erection.

   b. The equipment that was originally approved, shall be operated and maintained in a manner identical to that as specified in the initial construction permit.

5. Planned periodic modification of air contaminant sources shall be exempted from the requirements of this regulations, provided that:

   a. A prior permit has been obtained for all planned air contaminant sources, and,

   b. Each modification be reported to the Executive Secretary as soon as possible, and,

c. The prior permit contains provisions for controlling emissions from all probable air contaminant sources that may be expected to come into existence as a result of the periodic modification.

6. Other sources of minor significance specified by the Executive Secretary.

(9.0) Regulation XIX MEASUREMENT OF EMISSIONS OF AIR CONTAMINANTS

A. Responsible Persons to Have Tests Made

The Executive Secretary may require any person responsible for emission of air contaminants to make or have made tests to determine the emission of air contaminants from any source, whenever the Executive Secretary has reason to believe that an emission in excess of that allowed by an air pollution regulation is occurring. The Executive Secretary may specify testing methods to be used in accordance with good professional practice. The Executive Secretary may observe the testing. All tests shall be conducted by reputable, qualified personnel. The Executive Secretary shall be given a copy of the test results in writing and signed by the person responsible for the tests.

B. Executive Secretary May Make Tests

The Executive Secretary may conduct tests of emissions of air contaminants from any source. Upon request of the Executive Secretary the person responsible for the source to be tested shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.

(13.0) Regulation XX SUBMISSION OF EMISSION INFORMATION

A. General Provisions

1. The owner or operator of any source shall, upon notification from the Executive Secretary, maintain records of the nature and amounts of emissions from such source and/or any other information as may be deemed necessary by the Executive Secretary to determine whether such source is in compliance with applicable emission limitations or other control measures.

2. The information recorded shall be reported to the Executive Secretary on a semiannual basis commencing with the first full semiannual period after the Executive Secretary's notification to such owner or operator of the record-keeping requirements. The semiannual periods are January 1 to June 30 and

July 1 to December 31, except that the initial reporting period shall commence on the date the Executive Secretary issued notification of the record keeping requirements.

3. The records required by this regulation shall be completed on forms furnished by or satisfactory to the Executive Secretary, and shall be submitted within 45 days after the end of each reporting period.

4. All information collected or recorded in accordance with the provisions of this regulation shall be retained by the owner or operator for two (2) years after the date on which the pertinent report is submitted.

(51.16) Regulation XXI REQUIREMENTS FOR CONSTRUCTION OF NEW GASOLINE STORAGE FACILITIES

A. General

1. For purposes of this regulation, the term "gasoline" is defined as petroleum distillate having a Reid vapor pressure of 4 pounds or greater.

2. For purposes of this regulation, the term "submerged fill pipe" is defined as any fill pipe the discharge opening of which is entirely submerged when the liquid level is 6 inches above the bottom of the tank. "Submerged fill pipe" when applied to a tank which is loaded from the side is defined as any fill pipe the discharge opening of which is entirely submerged when the liquid level is 18 inches above the bottom of the tank.

B. Petroleum Storage Tanks

1. After the effective date of this regulation, no person shall build or install or permit the building or installation of any stationary tank, reservoir or other container of more than 40,000 gallons capacity which will or might be used for storage of any petroleum distillate having a vapor pressure of 1.5 pounds per square inch absolute or greater under actual storage conditions, unless such tank, reservoir or other container is to be a pressure tank capable of maintaining working pressures sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere or is designed and will be built, and equipped with one of the following vapor loss control devices:

a. A floating roof, consisting of a pontoon type or double deck type roof, which will rest on the surface of the liquid contents and be equipped with a closure seal*, or seals, to close the space between the roof edge and tank wall. The control equipment to be provided for in this subsection B(1) shall not be permitted if the gasoline or petroleum distillate to be stored will have a vapor pressure of 12.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging and sampling devices shall be built so as to be gas-tight except when gauging or sampling is to take place.

b. A vapor recovery system, consisting of a vapor-gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing such hydrocarbon vapors and gases so as to prevent their emission to the atmosphere and with all tank gauging and sampling devices gas-tight except when gauging or sampling is taking place.

c. Other equipment or means of equal efficiency for purposes of air pollution control as may be approved by the Executive Secretary.

C. Submerged Fill Pipes Required

1. After the effective date of this regulation, no person shall build or install or permit the building or installation of a stationary gasoline storage tank with a capacity of 250 gallons or more unless such tank is equipped with a permanent submerged fill pipe or is a pressure tank as described in subsection B(1) of this regulation, or is fitted with a vapor recovery system as described in subsection B(1)(b) of this regulation.

(2.0) Regulation XXII CIRCUMVENTION

No person shall cause or permit the installation or use of any device of any means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission of air contaminant which would otherwise violate an air pollution control regulation. This regulation shall not apply when the only violation involved is violation of a regulation based on concentration or presence of one or more air contaminants at locations beyond the premises on which a source or sources are located.

(2.0) Regulation XXIII ADDITIONAL AIR QUALITY CONTROL MEASURES MAY BE REQUIRED WHEN SOURCES ARE CLUSTERED IN A SMALL LAND AREA

A. Areas to Which This Regulation Applies

1. This regulation shall apply to areas in which there are one or more existing sources and/or proposed new sources of particulate matter in any circular area with a diameter of two miles (including sources outside metropolitan area) from which the sum of particulate emissions allowed from such sources by regulations of general application are or would be greater than 2,000 tons per year or 500 pounds per hour.

2. This regulation shall apply in areas in which there are one or more existing sources and/or proposed new sources of sulfur dioxide in any circular area with a diameter of two miles from which the sum of sulfur dioxide emissions from such sources allowed by regulations of general application are or would be greater than 1,000 tons for any consecutive three months or 1,000 pounds per hour.

B. Air Conservation Commission May Prescribe More Restrictive Air Quality Control Measures

1. In areas where this regulation applies, as specified in Section A herein,the Air Conservation Commission may prescribe air quality control requirements that are more restrictive and more extensive than provided in regulations of general application.

(6.0) Regulation XXIV TIME SCHEDULE FOR COMPLIANCE

Except as otherwise specified, compliance with the provisions of these regulations shall be according to the following time schedule:

A. All new installations shall comply as of going into operation.

B. All existing installations not in compliance as of the effective date shall be in compliance within six months of the effective date unless the owner or person responsible for the operation of the installation shall have submitted to the Executive Secretary in a form and manner satisfactory to him, a program and schedule for achieving compliance, such program and schedule to contain a date on or before which full compliance will be attained, and such other information as the Executive Secretary may require. If approved by the Executive Secretary such date will be the date on which the person shall comply.

The Executive Secretary may require persons submitting such program to submit subsequent periodic reports on progress in achieving compliance.

(8.0) Regulation XXV RULES FOR CONTROLLING EMISSIONS DURING PERIODS OF HIGH AIR POLLUTION POTENTIAL

A. General Provisions

1. This regulation shall apply to all emissions from any source or any premises.

2. It may apply to all or part of the metropolitan area depending upon which pollutant fulfills the requirements of subsection B(2) below, and whether or not air sampling reveals only a localized problem.

B. Air Pollution Alerts and Emergencies.

1. Alert and emergency level values are stated as:

   a. the product of the hourly sulfur dioxide concentration in parts per million, and the hourly particulate concentration in CoH per 1000 linear feet, or

   b. the concentrations of SO_2, CO, or oxidant.

   The basis of reference for the State of Missouri data shall be: Sulfur dioxide as measured by the continuous modified West-Gaeke method referenced in Regulation XIV A(7) or any other method standardized against such; particulates as measured by the automatic paper-tape sampler method, "ASTM Standard Method of Test for Particulate Matter in the Atmosphere, Optical Density of Filtered Deposit, D-1704-61"; Carbon monoxide as measured by the infrared spectrophotometer method, MSA Bulletin No. 0705-10, Instrument Division, Pittsburgh, Pennsylvania; photochemical oxidants as measured by "Analytical Methods of the 'Intersociety Committee on Methods for Ambient Air Sampling and Analyses', Health Laboratory Science, 1970".

2. Alert Values:

   a. Yellow Alert Value -- Any one of the following shall initiate the Yellow Alert:

      1. Product reaching 1.0 at any sampling station.

      2. Sulfur dioxide concentration reaching 0.36 ppm at any sampling station.

3. Photochemical oxidant concentration reaching .13 ppm at any sampling station.

4. Carbon monoxide concentration reaching 30 ppm at any station.

b. Red Alert value -- Any one of the following shall initiate the Red Alert:

1. Product reaching 1.5 at any sampling station.

2. Sulfur dioxide concentration reaching .75 ppm at any sampling station.

3. Photochemical oxidant concentration reaching .3 ppm at any sampling station.

4. Carbon monoxide concentration reaching 40 ppm at any station.

c. Emergency Alert value -- Any one of the following shall initiate an Emergency Alert:

1. Product reaching 2.5 at any sampling station.

2. Sulfur dioxide concentration reaching 1 ppm at any sampling station.

3. Photochemical oxidant concentration reaching .60 ppm at any sampling station.

4. Carbon monoxide concentration reaching 60 ppm at any station.

C. Air Pollution Watch.

1. Air Pollution Watch procedures shall be initiated by the Executive Secretary upon receipt of a 36 hour high air pollution potential advisory (HAPPA) from the Environmental Science Services Administration (ESSA) Weather Bureau for an area including all or part of the metropolitan area.

2. The following Watch procedures shall apply:

a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Watch conditions exist.

b. Notify all affected governmental control agencies that Watch conditions exist, and that coordination of action is required.

c. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 2 hours, with continual hourly review, at a central control location.

d. Inform the general public through the news media that a high air pollution potential exists, the area or areas where high initial readings have been obtained from sampling, and encourage persons suffering from respiratory ailments or heart conditions to take whatever precautions are most appropriate.

e. Backyard incineration, including the open burning of leaves, tree trimmings, garbage, and other refuse shall be prohibited throughout the entire metropolitan area.

f. All variances or permits allowing open burning shall be temporarily rendered invalid for the duration of the high air pollution potential.

g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary shall be notified that Watch conditions exist. All such industries shall be requested to voluntarily begin actions to reduce emissions of air contaminants from their operations, consistent with the provisions of their Yellow Alert plans. See Table I.

h. The Executive Secretary may request through the news media that the use of automobiles be restricted to necessary driving only.

D. Yellow Alert

1. Yellow Alert procedures shall be initiated by the Executive Secretary if a high air pollution potential exists, and the following requirements are met:

   a. The Yellow Alert values are equalled or exceeded as the arithmetic mean for 4 consecutive hours at any one sampling station within the HAPPA advisory area, unless there is a current ESSA Weather Bureau forecast of meteorological improvement within the next 24 hours.

2. The following Yellow Alert procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that Yellow Alert conditions exist.

b. Notify all affected governmental control agencies that Yellow Alert conditions exist, and that coordination of action is required.

c. Notify all hospitals within the affected area that Yellow Alert conditions exist.

d. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour, with continual hourly review at a central control location.

e. Inform the general public through the news media that a Yellow Alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

f. The Executive Secretary shall request very emphatically through the news media that all unnecessary use of automobiles be restricted, and that all entertainment functions and facilities be closed.

g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Yellow Alert Conditions shall initiate such plans upon notification by the Executive Secretary. See Table I.

h. No open burning will be allowed anywhere within the metropolitan area.

E. Red Alert

1. Red Alert procedures shall be initiated by the Executive Secretary, if the following requirements are met:

    a. A 36 or 24-hour high air pollution potential advisory (HAPPA) from the ESSA Weather Bureau is in effect for all or part of the metropolitan area.

    b. The Red Alert values equalled or exceeded as the arithmetic mean for 4 consecutive hours at any one monitoring station within the area.

The Red Alert can also be initiated if:

a. The Red Alert value is equalled or exceeded as the arithmetic mean for 12 consecutive hours, and a HAPPA forecasts stagnation for the following 12 hours, or

b. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 24 consecutive hours and a forecast of stagnation for the following 12 hours is received.

2. The following Red Alert procedures shall apply:

   a. Notify the technical staff, the chairman and members of the Missouri Air Conservation Commission that Red Alert conditions exist.

   b. Notify all affected governmental control agencies that Red Alert conditions exist and that coordination of action is required.

   c. Notify all hospitals within the affected area that Red Alert conditions exist.

   d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour with continual hourly review at a central control location.

   e. Inform the general public through the news media that a Red Alert eixsts, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

   f. Airlines operating within the Red Alert area shall be notified that such conditions exist, and that a reduction of flights out of the airport may be required.

   g. Non-local vehicular traffic may be diverted around the Red Alert area depending upon which pollutant or pollutants caused the alert.

   h. Local vehicular traffic shall through the news media be told to avoid certain areas, and emphatically told to restrict non-essential trips.

i. All incineration and open burning shall cease, regardless of location.

j. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the Executive Secretary for Red Alert conditions shall initiate such plans upon notification by the Executive Secretary. See Table II.

F. Air Pollution Emergency

1. Emergency procedures shall be initiated by the Executive Secretary, if the following requirements are met:

   a. A 36 or 24-hour high air pollution potential advisory (HAPPA) from the ESSA Weather Bureau is in effect for all or part of the metropolitan area.

   b. The air pollution emergency values are equalled or exceeded as the arithmetic mean of 4 consecutive hours at any one monitoring station.

   The air pollution emergency procedures can also be initiated if:

   a. The air pollution emergency value is equalled or exceeded as the arithmetic mean of 12 consecutive hours and a forecast of stagnation for the following 12 hours is received, or

   b. The Red Alert is equalled or exceeded as the arithmetic mean for 24 hours and a forecast of stagnation for the following 12 hours is received, or

   c. The Yellow Alert value is equalled or exceeded as the arithmetic mean for 26 hours and a forecast of stagnation for the following 12 hours is received.

2. The following emergency procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that an emergency exists.

   b. Notify all affected governmental control agencies that an emergency exists, and that coordination of action is required.

   c. Notify all hospitals within the affected area that an emergency exists, and to be so prepared.

d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1/2 hour with continual half-hour review at a central control location.

e. Open burning and incineration shall cease throughout the area.

f. Facilities which are sources of air contaminant emissions and are required to have filed approved plans with the Executive Secretary shall initiate such plans upon notification by the Executive Secretary or his representative that air pollution emergency conditions exist. See Table III.

g. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

h. All manufacturing facilities except those listed in F(2),(f) shall institute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations to the extent possible without causing injury to persons or damage to equipment.

i. All airplane flight originating within the area of the air pollution emergency shall be cancelled.

j. All places of employment described below shall immediately cease operation during the air pollution emergency:

- Mining and Quarrying
- Contract Construction Work
- Wholesale Trade Establishments
- Schools and Libraries
- Governmental agencies except those needed to administer air pollution alert programs and other essential agencies determined by the Executive Secretary to be vital for public safety and welfare and needed to administer the provisions of these regulations.
- Retail trade stores except those dealing primarily in sale of food or pharmacies
- Banks, real estate agencies, insurance offices and similar businesses.
- Laundries, cleaners and dryers, beauty and barber shops and photographic studios.
- Amusement and recreational service establishments such as motion picture theaters.
- Automobile repair and automobile service garages.

- Advertising offices, consumer credit reporting, adjustment and collection agencies, printing and duplicating services, rental agencies and commercial testing laboratories.

G. Termination of Alerts

When in the judgment of the Executive Secretary meteorological conditions and pollutant concentrations are such to warrant discontinuance of any alert condition, he shall notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that the alert has been discontinued, and issue a public notice to that effect.

TABLE I

YELLOW ALERT PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan
1. Electric Power Generating Facilities	1a. Reduction of emission by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (10:00 a.m. to 2:00 p.m.)
	c. Reduction of emissions by diverting electric power generation to facilities outside of area for which the alert is called.
2. Process Steam Generating Facilities having a rated heat input in excess of 10 million BTU/hr burning coal or fuel oil.	2a. Reduction of emissions by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (10:00 a.m. to 2:00 p.m.)
	c. Reduction of steam load demands consistent with continuing the operation of the plant.

Air Contaminant Source	Requirements for Plan
3. Manufacturing industries of the following (SIC) group designations which employ more than twenty (20) employees at any one location:	3a. Reduction of air contaminant emissions by curtailing, postponing, or deferring production and allied operations.
Paper and Allied Products Industries Group 26	b. Stop all trade waste disposal practices which emit particles, gases, vapors or malodorous substances including incineration.
Chemicals and Allied Products Industries Group 28	c. Reduction of heat load demands for processing to a minimum
Petroleum Refining and related industries Group 29	
Stone, Glass; Clay and Concrete Product Industries Group 32	
Primary Metals Industries Group 33	
4. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	4a. Reduction of air contaminant emissions by curtailing or deferring production and allied operations.
	b. Stop all trade waste disposal practices which emit particles, gases, vapors or malodorous substances including incineration.
	c. Reduction of heat load demands for processing to a minimum.

Air Contaminant Source	Requirements for Plan
5. Public and commercial refuse disposal operations	5a. Stop all open burning including disposal of diseased trees and burning at fire fighting schools.
	b. Operation of incinerators shall be limited to the hours between 10:00 a.m. and 2:00 p.m.

TABLE II

RED ALERT PLAN OBJECTIVES

All Yellow Alert plans shall be continued. In addition, the following steps shall be taken.

Air Contaminant Source	Requirements for Plan
1. Process steam generating facilities having a rated heat input in excess of 10 million BTU/hr burning coal or fuel oil.	1a. Maximum reduction of air contaminant emissions by utilization of fuels having the lowest ash and sulfur content.
	b. Maximum utilization of periods of high atmospheric turbulence (10:00 a.m. to 2:00 p.m.) for soot blowing and boiler lancing.
2. Manufacturing industries of the following SIC Group designations which employ more than twenty (20) employees at any one location: Paper and Allied Products Industries Group 26 Chemical and Allied Products Industries Group 28	2a. Maximum reduction of air contaminant emission by, if necessary, postponing production and allied operations.

Air Contaminant Source	Requirements for Plan
2. Petroleum Refining and Related Industries Group 29	2b. Maximum reduction of heat load demands for processing.
Stone, Glass, Clay and Concrete Product Industries Group 32	
Primary Metals Industries Group 33	
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a. Maximum reduction of air contaminant emissions by, if necessary, postponing production and allied operations.
4. Public and commercial refuse disposal operations.	4a. Stop operation of all incinerators.

TABLE III

AIR POLLUTION EMERGENCY PLAN OBJECTIVES

All Yellow and Red Alert plans shall be continued. In addition, the following steps shall be taken:

Air Contaminant Source	Requirements for Plan
1. Process steam generating facilities having a rated heat input in excess of 10 million BTU/hr burning coal or fuel oil	1a. Maximum reduction of air contaminant emissions by reducing heat and steam load demands to values consistent with preventing equipment damage.
	b. Maximum utilization periods of high atmospheric turbulence (10:00 a.m. to 2:00 p.m.) for soot blowing and boiler lancing.

Air Contaminant Source	Requirements for Plan
2. Manufacturing industries of the following SIC Group designations which employ more than twenty (20) employees at any one location: Paper and Allied Products Industries Group 26 Chemicals and Allied Products Industries Group 28 Petroleum Refining and Related Industries Group 29 Stone, Glass, Clay and Concrete Product Industries Group 32 Primary Metals Industries Group 33	2a. Elimination of air contaminant emissions from the manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary	3a. Elimination of air contaminant emissions from the manufacturing operation by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment. b. Maximum reduction of heat load demands for processing.

(14.0) Regulation XXVI PUBLIC AVAILABILITY OF EMISSION DATA

Emission data obtained from owners or operators of emission sources will be correlated with applicable emission limitations and other control measures, and will be made available to the public upon request.

AIR POLLUTION REGULATIONS

FOR

SPRINGFIELD, MISSOURI

CITY OF SPRINGFIELD
AIR POLLUTION REGULATIONS

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows:

(2.0) Section 1 - That the Springfield City Code be and the same is hereby amended by adding thereto one new chapter to be known as Chapter 2A relating to and providing for air pollution control standards within the City of Springfield, Missouri, and reading as follows:

CHAPTER 2A

AIR POLLUTION CONTROL STANDARDS

(2.0)

ARTICLE I

IN GENERAL

(2.0) Sec. 2A-1. Purpose.

The provisions of this chapter are designed to prevent and control air pollution within the City of Springfield, Missouri, by establishing ambient air quality controls and emission standards, declaring emissions which fail to meet such standards to be unlawful and a public nuisance, prescribing duties of the Director of Health for the City of Springfield, Missouri, prescribing penalties for the violation of this chapter, and prescribing procedures by which the provisions of this chapter may be executed.

(1.0) Sec. 2A-2. Definitions.

The following terms when used in this chapter shall have the following meanings ascribed thereto unless specifically provided otherwise elsewhere in this chapter:

DEFINITIONS

1. Air Contaminant: Any gaseous, liquid or solid matter which, when present in the atmosphere, contributes to a condition of air pollution, including but not limited to dust, sooty mists, smoke, fumes, fly ash, cinders, gases, vapor and odors.
2. Air Pollution: The presence in the outdoor atmosphere of one or more air contaminants or combinations thereof, in such

quantities and of such duration that they are or may tend to be injurious to human, plant or animal life, or property, or that interferes with the reasonable enjoyment of life and property or the conduct of business.

3. Control Equipment: Any equipment that has the function to prevent the formation of or the emission to the atmosphere of air contaminants from any fuel burning equipment, incinerator, or process equipment.

4. Director of Health: The Health Director of the City of Springfield or his duly authorized agent.

5. Existing Equipment: Things such as equipment, machines, devices, articles, contrivances or installations which are installed or have been acquired by the ultimate user at the time this chapter becomes effective; except any such equipment, machine, device, article, contrivance or installation other than a foundry cupola which is altered, repaired, modified or rebuilt at a cost of 30 per cent or more of the replacement cost, not including the cost of air pollution control equipment, within any twelve month period after the effective date of this chapter, or changed so as to significantly alter its emission characteristics, shall be classified as "new".

6. Fuel Burning Equipment: Any equipment, device, or contrivance used for the burning of any fuel, except refuse, and all appurtenances thereto, including ducts, breechings, fly ash collecting equipment, fuel feeding equipment, combustion controls, stacks and chimneys, used for indirect heating in which the material being heated is not contacted by, and adds no substance to, the products of combustion. Fuel burning equipment typically includes that used for heating water to boiling; raising steam or superheating steam; heating air as in a warm air furnace; furnishing process heat indirectly through its transfer fluids.

7. Incinerator: Any article, machine, equipment, contrivance, structure, or part of a structure used to burn refuse or to process refuse material by burning other than by open burning as defined herein.

8. Foundry Cupolas: A vertical cylindrical furnace with tuyeres and tapping spouts near the bottom used for melting iron in a foundry.

9. Multiple-Chamber Incinerator: Any incinerator consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned, the refractories having a Pyrometric Cone Equivalent

of 31, testing according to the method prescribed by the American Society for Testing and Materials Method No. C-24-56, as set forth in Section 2A-51 of this chapter.

10. New Equipment: Things such as equipment, machines, devices, articles, contrivances or installations acquired by the ultimate user or installed on or after the effective date of this chapter, and things or installations existing at said time other than foundry cupolas which are later altered, repaired, modified or rebuilt at a cost of 30 per cent or more of the replacement cost (but not including the cost of air pollution control equipment) within any twelve month period after the effective date of this chapter, or things or installations existing at said stated time which are later changed so as to significantly alter their emission characteristics.

11. Opacity: State of material which renders it partially or wholly impervious to rays of light when observed by a human being.

12. Open Burning: The burning of any materials where air contaminants resulting from combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. For the purposes of this definition, a chamber shall be regarded as enclosed, when during the time combustion takes place, only such apertures, ducts, stacks, flues or chimneys as are necessary to provide combustion air and to permit the escape of exhaust gases are open.

13. Particulate Matter: Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

14. Person: Same as defined in Section 1-2 of this Code.

15. Process Equipment: Any equipment, device or contrivance for changing any material whatever, or for storage or handling of any materials, the use or existence of which may cause any discharge of air contaminants into the outdoor atmosphere but not including the equipment specifically defined as "fuel burning equipment", "incinerator", or "control equipment" in this chapter.

16. Process Weight: The total weight of all materials introduced into source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for the purposes of combustion.

17. Process Weight Rate: A rate established as follows:

    (a) For continuous or long-run steady-state source operations, the total process weight for the entire period of continued operation or for a typical period thereof, divided by the number of hours such period or portion thereof.

(b) For cyclical or batch source operations, the total process weight for a period that covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such a period.

Where the nature of any process or operation or design of any equipment is such as to be reasonably described by both paragraphs (a) and (b) of the definition of process weight rate, then in that event, the interpretation resulting in the minimum value for allowable emissions shall apply.

18. Refuse: Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.

19. Registration: The notification of the air pollution control agency in the manner prescribed by the Director of Health of the installation, alteration or existence of fuel burning equipment, process equipment, incinerators or control equipment.

20. Ringelmann Chart: "Ringelmann's Scale for Grading the Density of Smoke" as published in U.S. Bureau of Mines Information Circular 8333, as set forth in Section 2A-52 of this chapter.

21. Seal for Sealing Equipment: A device installed by the Director of Health so as to prevent use of the process equipment, fuel burning equipment, incinerators or control equipment causing a violation or from which a violation of this chapter originates.

22. Source Operation: The last operation preceding the emission of an air contaminant, which operation (a) results in the separation of the air contaminant from a material or in the conversion of a material into air contaminants, and (b) is not solely an air pollution abatement operation.

23. Stack or Chimney: A stack, chimney, flue, conduit or opening arranged for the emission into the outdoor atmosphere of air contaminants.

24. Standard Conditions: A gas temperature of 60 degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

25. Trade Waste: A waste material or product resulting from construction operation or the prosecution of any business, trade or industry, or from any demolition operation.

(2.0)

ARTICLE II

ADMINISTRATIVE ORGANIZATION

(15.0) Sec. 2A-3. Director of Health to enforce chapter.

It shall be the duty of the Director of Health for the City of Springfield to investigate and take actions within the scope of his power and within the range of this chapter to prevent and abate sources of air pollution.

(15.0) Sec. 2A-4. Specific powers of Director of Health.

The Director of Health shall have the power and duty to:

(a) Make such inspections and tests deemed necessary by the Director of Health to determine compliance with the provisions of this chapter;

(b) Require the submission of air contaminant emission information as needed for the purpose of emission inventory and registration of equipment on forms provided by the Director of Health;

(c) Determine the equipment to be registered, the persons to submit registration, the information required and the means for maintaining current status of the registration;

(d) Investigate all complaints of violations of this chapter and issue notices and orders granting a reasonable time to comply with the provisions of this chapter;

(e) Institute necessary proceedings to secure abatement of violations of this chapter;

(f) Advise planning and zoning agencies regarding air pollution aspects of planning and zoning functions in order to prevent land use conflicts resulting in air pollution problems;

(g) Make recommendations regarding needed revisions in this, or any other law or ordinance pertaining to air pollution;

(h) Collect and disseminate information on air pollution control;

(i) Carry out a continuing program of outdoor air monitoring to evaluate air quality in the City of Springfield;

(j) Review those matters having a bearing upon air pollution, referred by other agencies (such as planning, zoning, building and fire departments) and make reports and recommendations where necessary;

(k) Encourage the voluntary cooperation of civic, tehcnical, scientific, and educational societies to achieve the purposes of this chapter;

(l) Prepare and develop a comprehensive plan or plans for the prevention, abatement and control of air pollution;

(m) Plan and implement a continuing inventory of air pollutant emissions.

(16.0) Sec. 2A-5. Establishment of Board of Air Pollution Appeals.

The City Manager with the consent of the City Council of the City of Springfield shall appoint a Board of Air Pollution Appeals. The Board shall consist of five (5) members each of whom shall serve a term for four (4) years and until his successor shall have been appointed. Of the initial appointments to the Board, two of the five members shall be appointed for a term of two years with their successors to be appointed for a full term thereafter. The members of the Board shall consist of a licensed physician knowledgeable in the health effects of air pollution, a professional engineer experienced and competent in matters of air pollution control, a practicing attorney, a representative of City government and a member of the community at large. All of the members of the Board shall reside within the City of Springfield.

(2.0)

ARTICLE III

APPROVAL OF PLANNED INSTALLATIONS

(3.0) Sec. 2A-6. Plans shall demonstrate compliance with this chapter before permit shall issue.

The Building Regulations Section of the Public Works Department of the City of Springfield shall not issue a permit for the erection, construction, reconstruction, alteration and expansion or repair of any building or structure when the plans and specifications for such work include the installation, modification or alteration of any fuel burning equipment or incinerators; nor shall the said Section of the Public Works Department issue any certificate of occupancy for any building or structure to be used for industrial purposes; nor shall any person install any new fuel burning equipment or incinerators; nor shall any person hereafter begin the use of or place in operation any new fuel burning equipment or incinerator unless and until plans and specifications have been submitted to the Director of Health or operational tests have been conducted sufficient to demonstrate to the Director of Health that such fuel burning equipment or incinerators are in compliance with all of the provisions of this ordinance or that the use and occupancy of such industrial building is in compliance with this chapter and the Director shall have issued an operational or construction permit for the equipment. The

Director of Health shall have a period of sixty (60) days from the submission of any such plans or the modification thereof in which to approve or reject the plans. If they shall be approved he shall issue a permit for the work called for by the plans, which shall be in writing. The Director may limit a permit to construction purposes only and may require actual trial operation prior to issuance of an operational permit for any equipment. In the event the Director of Health shall deny a permit he shall set forth in writing his reasons therefor and a copy thereof shall be made available to the applicant. In the event plans shall not be sufficient to demonstrate the adequacy of any equipment or incinerator to meet the provisions of this ordinance, the Director of Health shall notify the applicant of such fact in writing as soon as possible and in what points the plan shall be deemed to be insufficient. It shall thereupon be the duty of the applicant to submit new and additional plans sufficient to meet the needs of the Director of Health.

(3.0) Sec. 2A-7. Permit not required - when.

No permit under Section 2A-6 shall be required for any of the following:

(a) Oil fired fuel burning equipment burning No. 1 or No. 2 fuel oil exclusively;

(b) Gas fired fuel burning equipment;

(c) Solid fuel and residual fuel oil fired fuel burning equipment when the maximum heat input from such fuel will not exceed 350,000 BTU per hour.

(3.0) Sec. 2A-8. Director of Health may require certification of plans in compliance with Code.

In the event the plans, specifications or other information submitted to the Director of Health pursuant to Section 2A-6 of this article shall reveal complex design and/or technological ingenuity or advances of considerable magnitude, then the Director of Health may, at his option, require the applicant to file with the Director a certificate on behalf of the applicant signed and sealed by a registered professional engineer certifying that the plans, specifications or other information submitted provide for an installation which will meet all of the requirements of all of the applicable provisions and limitations of this chapter. Upon receipt of such certification the Director of Health may issue a permit for the work called for by said plans or specifications.

(3.0) Sec. 2A-8.1. Issuance of permit shall not excuse a failure of compliance.

The City Council of the City of Springfield hereby declares that the duties and obligations of the Director of Health set forth in this chapter are duties and obligations owed only to the City government and are not owed to any individual, firm or corporation. The issuance of a permit by the Director of Health shall not be taken to excuse faithful compliance with the terms of this chapter by any person and the existence of such a permit shall be no defense to any action brought to enforce the provisions of this chapter.

(50.1.2)

ARTICLE IV

RESTRICTION ON EMISSION OF VISIBLE AIR CONTAMINANTS FROM EQUIPMENT

(50.1.2) Sec. 2A-9. Limitation on emission of visible air contaminants.

No person shall discharge or permit the discharge into the outdoor atmosphere from any single source of emission whatsoever any air contaminant:

(a) Of a shade or density equal to or darker than that designated as Number 2 on the Ringelmann Smoke Chart; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke of a shade or density equal to or darker than that designated as Number 2 on the Ringelmann Smoke Chart.

(2.0) Sec. 2A-10. Exceptions to Section 2A-9.

Notwithstanding any of the provisions of Section 2A-9 of this article, it shall not be unlawful to discharge into the outdoor atmosphere from any single source of emission:

(a) Air contaminants of a shade, density, or opacity equal to, but not darker than that designated as Number 2 on the Ringelmann Chart so long as the emission shall not exist for a period or periods aggregating more than six minutes in any consecutive sixty minute period, or

(b) Air contaminants of a shade, density or opacity equal to, but not darker than that designated as Number 3 on the Ringelmann Chart so long as the emission shall not exist for a period or periods aggregating more than six minutes in any consecutive sixty minute period and the emission is caused by the starting of or cleaning of a fire, and so long as such emissions do not occur on more than three occasions during any consecutive 24 hour period, or

(c) Air contaminants which fail to meet the requirements of Section 2A-9 only because of the presence therein of uncombined water, or

(d) Air contaminants emanating from a foundry cupola existing at the time of the passage of this chapter, or from an electric metallurgical furnace, or

(e) Air contaminants the source of which is a fire ignited for the purpose of training firemen or for research in fire protection and prevention, provided that the Director of Health shall have previously issued a permit in writing authorizing the ignition of the fire for the purpose of training firemen or for fire research and prevention purposes, or

(f) Air contaminants resulting from an unavoidable breakdown or malfunction of equipment, or

(g) Air contaminants resulting from a charcoal or similar fire being used for recreational purposes or being used for non-commercial preparation of food, or

(h) Air contaminants resulting from the operation of a wood-burning stove or a fireplace in a dwelling.

(51.5)

ARTICLE V

EMISSION OF PARTICULATE MATTER FROM FUEL BURNING EQUIPMENT

(2.0) Sec. 2A-11. Purpose of this article.

Provisions of this article shall relate only to fuel burning equipment. The word "fuel" shall include such things as coal, coke, lignite, coke breeze, fuel oil, wood and natural gas, but shall not include refuse. The word "fuel" shall also include products or by-products of a manufacturing process when they are burned as fuel or in conjunction with fuel in fuel burning equipment.

(2.0) Sec. 2A-12. Determining heat content of coal.

The heat content of coal shall be determined according to the American Society for Testing and Materials method D-27-68, "Laboratory Sampling and Analysis of Coal and Coke", or the American Society for Testing and Materials method D-2015-66, "Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter", as set forth in Section 2A-53.

(2.0) Sec. 2A-13. Determining heat input.

For purposes of this article heat input of fuel burning equipment shall be the value which the manufacturer or designer of the equipment has guaranteed as the maximum heat input value of the equipment; but if there should be no such manufacturer's guaranteed maximum input value or if it shall not be valid because the equipment has been altered, then the heat input value of any fuel burning equipment shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The total heat input value of all fuel burning equipment at a plant or on a premises shall be used for determining the maximum allowable amount or particulate matter which may be emitted from the plant or from the premises.

(9.0)
(50.1) Sec. 2A-14. Measurement of particulate matter emitted.

The amount of particulate matter emitted for the purposes of this article shall be the total amount emitted from all stacks located at a plant or on a premises and shall be measured according to Section 2A-25.

(51.5) Sec. 2A-15. Emission limitations on fuel burning equipment.

No person shall cause, allow or permit the emission of particulate matter from all the stacks of fuel burning equipment at a plant or on a premises in excess of .60 pounds for each million BTU per hour total heat input if the total heat input of the equipment is 10 million BTU or less. If the total heat input of the fuel burning equipment is more than 10 million BTU, then the amount of particulate matter which may be emitted for each 1 million BTU of total heat input shall decrease as the total heat input of the fuel burning equipment increases, as follows:

(a) No more than 0.41 pounds for each million BTU total heat input from equipment having a total heat input of 50 million;

(b) No more than 0.35 pounds for each million BTU total heat input from equipment having a total heat input of 100 million;

(c) No more than 0.24 pounds for each million BTU total heat input from equipment having a total heat input of 500 million;

(d) No more than 0.21 pounds for each million BTU total heat input from equipment having a total heat input of 1,000 million;

(e) No more than 0.17 pounds for each million BTU total heat input from equipment having a total heat input of 2,000 million;

(f) No more than 0.14 pounds for each million BTU total heat input from equipment having a total heat input of 5,000 million;

(g) No more than 0.13 pounds for each million BTU total heat input from equipment having a total heat input of 7,500 million;

(h) No more than 0.12 pounds for each million BTU total heat input from equipment having a total heat input of 10,000 million or more.

The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate total heat input between any of the total heat input amounts set forth in Subsections (a) through (h) above shall be determined either by linear interpolation, or by using the following equation:

> $\log Y = 0.2332 \log X - 2.0111$ where X represents each million BTU input of the total heat input and Y represents the allowable pounds of emissions.

(9.0) Sec. 2A-16. Tests for compliance with this article shall not be made - when.

Compliance with the provisions of this article shall not be determined during periods when a new fire is being built, during start-up, change of load, fueling, during an operational breakdown or other emergency conditions, while air pollution control equipment is being cleaned or repaired, or during sootblowing, but shall be determined during steady-state conditions.

(2.0) Sec. 2A-17. Certain equipment deemed to comply with this article.

The person having the control over the operation of any fuel burning equipment used for indirect heating in any plant or on any premises may, at his option, elect to eliminate, for the purpose of determining compliance with the provisions of this article, any such fuel burning equipment normally scheduled to operate less than 1500 hours per year, provided that such equipment is provided with air pollution control equipment having a collection efficiency of not less than 85%, in which case such indirect heating fuel burning equipment shall be deemed to comply with the provisions of this article and shall not be considered when determining the compliance of any other fuel burning equipment at any plant or on any premises. The Director of Health of the City of Springfield may require submission of proposed operating schedules of such indirect heating fuel burning equipment in advance of operation and submission of reports of actual operating schedules for any year.

(50.1.1)

ARTICLE VI

RESTRICTION ON EMISSION OF PARTICULATE MATTER FROM INDUSTRIAL PROCESSES

(2.0) Sec. 2A-18. General provisions of this article.

This article shall be deemed to apply to any operation, process or activity, except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials, and except the burning of refuse or the processing of salvageable materials by burning.

(9.0) Sec. 2A-19. Emission tests made - how.

Emission tests relating to this article shall be made in accordance with Section 2A-25.

(2.0) Sec. 2A-20. Emission limitations in general.

Except as otherwise provided in this article no person shall cause, allow or permit the emission into the outdoor atmosphere of particulate matter in any one hour from any source in excess of the amount shown in Table 1 of Section 2A-54 of this chapter for the process weight allocated to such source.

(2.0) Sec. 2A-21. Special limitations.

Notwithstanding the provisions of Section 2A-20, no person shall be required to reduce the concentration of particulate matter below the concentration specified in Table 2 of Section 2A-54 of this chapter based upon the source gas volume of the emission source, except that any person seeking to rely upon this section shall have the burden of establishing source gas volume demonstrating to the Director of Health of the City of Springfield the factors used to determine such volume and the methods of determining and computing the volume and that all of such determinations and methods are reasonably applicable and accurate.

(2.0) Sec. 2A-22. Allowable substitute for source gas and volume.

The volume of gases passing through and leaving an air pollution abatement operation may be substituted for the source gas volume of the source operation served by such air pollution abatement operation for the purposes of Section 2A-21, provided that such air pollution abatement operation emits no more than 40% of the weight of the particulate matter entering therein, and provided further that the substituted volume shall be corrected to standard conditions and to a moisture content no greater than that of any gas stream entering the air pollution abatement operation. The burden of demonstrating the volume of gases passing through and leaving such air pollution abatement operation shall be upon the person seeking to use such substitute volume of gases for the source gas volume in the same manner as the burden is imposed to establish source gas volume under Section 2A-21.

(50.1) Sec. 2A-23. Maximum emission of particulate matter notwithstanding Sections 2A-21 and 2A-22.

Notwithstanding the provisions of Sections 2A-21 and 2A-22 of this article, no person shall cause, allow or permit the emission of any particulate matter from any source in a concentration in excess of 0.30 grains per standard cubic foot of gas, whether source gas or a volume of gas substituted therefor.

(2.0) Sec. 2A-24. Exceptions to this article.

The provisions of this article shall not apply to:

(a) Existing foundry cupolas, provided that such existing foundry cupolas shall be equipped with gas cleaning equipment to reduce particulate matter discharged to the atmosphere to the level established in Table 3 of Section 2A-54 of this chapter; or

(b) To a process during periods when a new fire is being built, during the start-up of an operation, during an operational breakdown, or while air pollution control equipment is being cleaned.

(9.0)

ARTICLE VII

STACK EMISSION TEST METHOD

(9.0) Sec. 2A-25. Stack emission test methods in general.

Stack emission tests for any new or existing process equipment, fuel burning equipment or control equipment or incinerator shall be undertaken by generally recognized standard methods of measurement. The American Society of Mechanical Engineers "Test Code for Dust Separating Apparatus," PTC 21-1941, as set forth in Section 2A-55, and the American Society of Mechanical Engineers "Test Code for Determining Dust Concentration in Gas Streams," PTC 27-1957, as set forth in Section 2A-56, may be used by the Director of Health under most general conditions but may be modified or adjusted by the Director of Health in order to meet specific sampling conditions or needs based upon good engineering practice, judgment and experience. Whenever the Director of Health shall deem it necessary or desirable to vary from procedures prescribed above for test purposes, he shall notify in writing the person in charge of the operation of the facility to be tested advising of the reason for the departure from the test methods above described and of the proposed test methods to be used. If the operator of the facility shall question the reasonableness or accuracy of the test method proposed, he shall within ten (10) days following receipt of notice of intent to use the test method notify the Director of Health of the City of Springfield in writing of his objection to such proposal and the grounds therefor. Whereupon, the Air Pollution Board of Appeals shall be advised of such protest by the Director of Health and shall set within a fifteen (15) days period thereafter a date for a hearing upon the proposed test methods and the objection thereto and may sustain or modify the actions of the Director of Health as it finds necessary based upon the evidence presented to provide for reasonable and accurate testing methods under the conditions existing.

(9.0) Sec. 2A-26. Test facilities.

It shall be the responsibility of the person having control over the operation of any equipment to be tested under this chapter to provide at his expense reasonable and necessary openings in the system or stack and safe and easy access thereto in order to permit technically valid samples and measurements to be taken for the purposes of this chapter. All new potential sources of air contaminants erected after the effective date of this chapter shall at the time of construction be provided with adequate openings in the system or stack, and safe and easy access thereto, in order to permit technically valid samples and measurements to be taken under this chapter and the plans therefor shall show such openings.

(9.0) Sec. 2A-27. Cost of emission tests.

The Director of Health may perform or have performed the necessary emission tests at the expense of the City of Springfield, provided, however, he may accept a test conducted by a representative of the owner or person having control over the operation of the installation on the condition that the person so electing to conduct his own stack emission tests shall pay for those tests regardless of their outcome. The results of such tests will be accepted as valid only if the test method, procedure and qualifications of those taking the test are approved by the Director of Health.

(51.13)

ARTICLE VIII

OPEN BURNING

(51.13) Sec. 2A-28. Open burning of refuse prohibited.

No person shall cause, permit or allow the open burning of refuse.

(51.13) Sec. 2A-29. Salvage operations by open burning prohibited.

On and after the 270th day following the effective date of this chapter no person shall cause, permit or allow a salvage operation to be conducted in whole or in part by open burning.

(51.13) Sec. 2A-30. Restrictions on burning of trade wastes.

On and after the 90th day following the effective date of this chapter, no person shall cause, permit or allow the disposal of trade wastes by open burning.

(51.13) Sec. 2A-31. Certain open burning allowed - when.

The open burning of trade wastes and vegetation shall be permitted only when it has been shown that such open burning is reasonably necessary for disposal and that the disposal will not unreasonably effect the public health, safety or welfare. Any person contending that such is the case and desiring to engage therefor in open burning shall file a request to do so with the Director of Health. The application shall state the following:

(a) The name, address and telephone number of the person submitting the application;

(b) The type of business or activity involved;

(c) A description of the proposed equipment and operating practices, the type, quantity, and composition of material to be burned, and the expected composition and amount of air contaminants to be released to the atmosphere, where known;

(d) The schedule of burning operations;

(e) The exact location where the open burning will occur;

(f) Reasons why open burning is reasonably necessary for disposal and will not unreasonably effect public health, safety and welfare;

(g) Evidence that the proposed open burning has been approved by the Fire Chief and is not in violation of the Fire Code of the City of Springfield.

If the Director of Health shall find upon examination of the application that the open burning proposed in reasonably necessary for disposal and that it will not unreasonably effect the public health, safety or welfare, he may grant a permit to conduct such open burning subject, however, to the provisions of any other law or ordinance of the City of Springfield and also upon such conditions as the Director of Health may impose so as to limit the open burning to meet the standards herein established.

Sec. 2A-32. (Reserved for future material.)

(2.0) Sec. 2A-33. Exceptions to this article.

Notwithstanding any of the other provisions of this article to the contrary, this article shall not apply to:

(a) Fires set in accordance with agricultural operations related to the growing or harvesting of crops;

(b) Fires set for the purpose of instructing and training firemen in the methods of fighting fires, or as long as the fire is used for recreational purposes, or fires used for the non-commercial preparation of food such as by barbecueing.

(51.9)

ARTICLE IX

INCINERATOR

(51.9) Sec. 2A-34. Prohibition of single chamber incinerators.

After the effective date of this chapter, only multiple chamber incinerators or their equivalent shall be constructed or installed. Incinerators existing at the time of the effective date of this chapter which are not multiple chamber incinerators or their equivalent shall be altered, modified, rebuilt or replaced as may be necessary to meet the performance requirements of this section.

(51.9) Sec. 2A-35. Maximum emission limitations from incinerators.

No persons shall cause, permit or allow the emission of any particulate matter from the stack or chimney of any incinerator in excess of the following limits:

(a) Incinerators with a maximum refuse burning capacity of less than 200 pounds of refuse per hour, the maximum emission rate shall be 0.3 grains of particulate matter per standard cubic foot of dry flue gas corrected to 12% carbon dioxide;

(b) Incinerators with a maximum refuse burning capacity of 200 or more pounds of refuse per hour, the maximum emission rate shall be 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12% carbon dioxide.

(51.9) Sec. 2A-36. Determination of burning capacity of an incinerator.

The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the Director of Health in accordance with good engineering practice. In case of conflict, the findings of the Director of Health shall govern.

(50.1)
(51.9) Sec. 2A-37. Determination of particulate matter emitted from an incinerator.

The amount of particulate matter emitted from any incinerator shall be determined according to Section 2A-25. In calculating the amount of particulate matter in a stack gas, the carbon dioxide produced by burning of any liquid or gaseous fuel in the incinerator shall be excluded from the calculation of 12% carbon dioxide. Emissions shall be measured when the incinerator is operating at its maximum capacity or at any other burning rate during which emission of particulate matter is greater.

(6.0) (51.9) Sec. 2A-38. Time limit for existing incinerators to be brought into compliance.

Incinerators not complying with the requirements of this article shall be made to comply within the time hereinafter set forth, or shall be abandoned at end of that time.

(a) Incinerators with a capacity of 2,000 pounds per hour or greater, twelve months from the effective date of this chapter;

(b) Incinerators with capacities between 1,000 - 1,999 pounds per hour, 18 months from the effective date of this chapter;

(c) Incinerators with capacities between 500 - 999 pounds per hour, 24 months from the effective date of this chapter;

(d) Incinerators with capacities less than 500 pounds per hour, 30 months from the effective date of this chapter.

(50.6)

ARTICLE X

CONTROL OF ODORS IN THE AMBIENT AIR

(50.6) Sec. 2A-39. Prohibition on emission of odor.

No person shall emit odorous matter such as to cause an objectionable odor:

(a) On or adjacent to residential, recreational, institutional, retail sales, hotel or educational premises, or

(b) On or adjacent to industrial premises when air containing such odorous matter is diluted with 20 or more volumes of odor-free air, or

(c) On or adjacent to premises other than those in (a) and (b) when air containing such odorous matter is diluted with four or more volumes of odor-free air.

(50.6) Sec. 2A-40. Determination of objectionable odor.

The above requirement shall apply only to objectionable odors. An odor will be deemed objectionable when 30 percent or more of a sample of 20 or more people or 75 percent of a sample of less than 20 people exposed to it believe it to be objectionable in usual places of occupancy.

(50.7)

ARTICLE XI

NUISANCES BECAUSE OF AIR POLLUTION

(50.1) Sec. 2A-41. Unlawful to permit escape of gases or particulate matter so as to endanger health, safety or welfare.

It is unlawful for any person to cause, allow or permit the escape of gases or particulate matter from any source whatsoever in such a manner or in such quantities as to unreasonably endanger the health, safety or welfare of any person or of the public, or in such quantities or in such a manner as to cause unreasonable injury or damage to property or business. The escape of such matter is declared to be a public nuisance.

(13.0)

ARTICLE XII

SUBMISSION OF INFORMATION

(2.0) Sec. 2A-42. Director of Health may require information about emission of air contaminants.

The Director of Health may require information about points of emission of air contaminants, whether by duct, stack, flue, equipment or by any other means when such information is necessary for the conduct of the work of the Director of Health. A period of thirty (30) days shall be allowed for the submission of such information. However, in cases of emergency, the Director of Health may designate any lesser time which he believes to be justified.

Any information so submitted shall be maintained as confidential by the Director of Health and he shall not divulge such information except as it shall be necessary to effectuate the purposes of this chapter.

(5.0)

ARTICLE XIII

VARIANCE PROVISIONS

(3.0) Sec. 2A-43. Director of Health may issue temporary permits to grant time to come into compliance with this chapter.

Where air contaminant emission sources in existence prior to the effective date of this chapter do not meet the emission limitations contained in this chapter, then a program to meet the air contaminant emission limitations stipulated in this chapter shall be developed and offered to the Director of Health by the person having control over the source of emission. The Director of Health shall have the authority to grant a temporary permit for periods of six (6) months at a time for the continued operation of non-complying equipment or processes, but only in the event that the person having control of the emission source shall demonstrate in writing to the Director of Health that appropriate steps have been or will be taken which will secure compliance with this chapter within a reasonable time under the circumstances. In evaluating an application for issuance of a temporary permit, the Director of Health shall take into consideration the following factors:

(a) Action taken to control air pollution within emission limitations in effect prior to the application;

(b) Efficiency of any existing control equipment relative to that which would be required to meet emission limitations of this ordinance;

(c) Temporary interim control measures intended to minimize existing pollution levels;

(d) The effect the source of emission has on air pollution generally or in the immediate vicinity of the source;

(e) The degree of control in relation to other similar facilities which produce air pollution;

(f) The age and prospective life of the facility in question.

Reports indicating the progress of these programs shall be submitted semi-annually to the Director of Health by the owner of the equipment or process in question. If the progress of the program is deemed by the Director of Health to be unsatisfactory because he finds either (1) no progress has been made, or (2) the amount of progress shown indicates an insincere attempt upon the part of the owner or operator to comply with the terms of this ordinance within a reasonable time, or (3) the program intended to be pursued by the owner or operator of the equipment would not reasonably bring the equipment into compliance with the terms of this ordinance, or (4) the program of the owner or operator of the equipment while competent to bring the equipment into compliance with the terms of this ordinance is nevertheless designed or established so as to require an unreasonable time to bring the equipment into compliance; then the Director of Health may suspend the program and institute violation proceedings. If the report shows a satisfactory program with satisfactory progress the Director of Health may renew the temporary certificate for an additional six (6) months period.

(2.0) ARTICLE XIV

SEALING

(2.0) Sec. 2A-44. Sealing of equipment in violation of this chapter.

Whenever any equipment shall have been in violation of any of the provisions of this chapter on three occasions within any consecutive twelve month period and notification thereof has been given of each such occasion to the operator of such equipment, then it shall be the duty of the Director of Health to give at least twenty (20) days prior notice to the person having control over the operation of such equipment of a hearing to be held before the Director of Health at which such person shall be required to show cause why the offending equipment should not be sealed. Notice of the hearing shall be in writing and served by the Director of Health or by one of his employees or by any police officer of the City of Springfield upon the person having control over the operation of the equipment or upon any member of his household over the age of 15, if he shall reside within the City of Springfield, and if he shall not reside within the City of Springfield or for any other reason such personal service may not be had, then the Director of Health shall direct a copy of such notice to the last known address of the person having control over the operation of the equipment by United States mail and a copy of the notice of the hearing shall be posted in a conspicious place upon the premises where the equipment proposed to be sealed is located. Notice by mail or by posting shall be effective upon the day that such mailing shall occur or such posting shall occur. If upon the hearing the Director of Health finds upon the basis of the evidence presented that the person having control over the operation of the equipment has not taken action to bring the equipment into compliance with all of the provisions of this chapter of which he shall have previously received notice of violation, then the Director of Health may order the equipment to be sealed from use. It shall be unlawful for any person to break any seal affixed as a result of any such order unless authorized in writing by the Director of Health to do so.

(16.0) ARTICLE XV

HEARINGS

(16.0) Sec. 2A-45. Hearings of Board of Air Pollution Appeals.

The Board of Air Pollution Appeals shall hear all appeals from orders issued by the Director of Health regarding this chapter, or from the refusal of the Director to issue a permit hereunder or the revocation of such a permit, or from any other action of the Director of Health which does or will actually effect substantial rights or obligations of the person appealing. Any person entitled to such an appeal may request and shall be granted a hearing before the Board of Air Pollution Appeals, provided, that such a person shall file in the office of the Director of Health a written statement requesting such hearing, and setting forth a brief statement of the grounds therefor, within ten (10) days after the day the order was served or other complained of action occurred. Upon the filing of such a petition the Board of Air Pollution Appeals shall set a time and place for such hearing and shall give the petitioner written notice thereof. At such hearing the petitioner shall be given the opportunity to be heard and to show why the action of the Director was improper under this chapter. The hearing shall be commenced not later than fifteen (15) days after the day on which the petition was filed, provided, that, upon application of the petitioner, the Board of Air Pollution Appeals may postpone the date of the hearing for a reasonable time beyond such fifteen (15) day period, if in its judgment the petitioner has submitted a good and sufficient reason for such postponement.

The Board of Air Pollution Appeals shall review the actions of the Director of Health and upon reasonable grounds shall modify, withdraw, or order compliance with the order or other action appealed from.

If previously requested by the petitioner, the proceedings at such hearing, including the findings and decision of the Board of Air Pollution Appeals, shall be summarized, reduced to writing, and entered as a matter of public record in the office of the Director of Health. Such record shall also include a copy of every notice or order issued in connection with the matter. Any person aggrieved by the decision of the Board of Air Pollution Appeals may seek relief therefrom in any court of competent jurisdiction, as provided by the laws of this State.

(7.0)

ARTICLE XVI

BREAKDOWN OF EQUIPMENT

(7.0) Sec. 2A-46. The results of breakdown of equipment.

Emissions exceeding any of the limits established in Articles IV, V, VI, IX, X and XI as a direct result of upset conditions in or breakdown of any process equipment, fuel burning equipment, refuse burning equipment, or control equipment or related operating equipment beyond the control of the person having control over the operation of such equipment shall not be deemed in violation of any of said articles or of this chapter, provided that the operator immediately advises the Director of Health of the circumstances of such breakdown and outlines a corrective program acceptable to the Director. A failure to expend necessary funds or to have established adequate maintenance or replacement programs shall not be matters beyond the control of a person having control over the operation of the equipment within the meaning of this chapter.

(2.0) ARTICLE XVII

CIRCUMVENTION

(2.0) Sec. 2A-47. Unlawful to install a device to conceal emissions.

No person shall build, erect, install or use any article, machine, equipment or other contrivance, the sole purpose of which is to dilute or conceal an air contaminating emission unless it shall result in a reduction in the total release of air contaminants to the atmosphere.

(2.0) ARTICLE XVIII

SERVICE OF ORDERS OR NOTICES

(2.0) Sec. 2A-48. Method of service of notice or orders.

Whenever the Director of Health shall find it necessary under the provisions of this chapter to serve any notice or any order, it shall be sufficient that the same be served upon the person having control over the operation of the air polluting equipment or responsible for the source of air pollution emission. If such person shall be a resident of the City of Springfield and shall be subject at the time to personal service, then such service shall be in writing served by the Director of Health or any of his employees or by any police officer of the City of Springfield upon the person or upon any member of his household over the age of 15 years. In the event the person to be served shall not be available for such personal service or shall be a non-resident of the City of Springfield or for any other reason cannot be personally served within the City of Springfield, Missouri, then it shall be sufficient that service of the notice or order be given by United States mail directed to the last known address of such person and by posting the notice or order upon the premises where the violation of this chapter occurred or is occurring or other thing is to take effect. Such service by mail and posting shall be effective upon the day that such mailing shall occur or the day that such posting shall occur, whichever shall be the later.

(15.0) ARTICLE XIX

ENFORCEMENT OF THIS CHAPTER

(15.0) Sec. 2A-49. Punishment for violation of this chapter.

Any person who shall violate any of the provisions of this chapter or any lawful order of the Director of Health of the City of Springfield, Missouri, under this chapter shall be punished upon conviction thereof in accordance with the provisions of Section 1-7 of the Springfield City Code.

(2.0) Sec. 2A-50. Director of Health may cause appropriate civil proceedings to be brought.

Notwithstanding the provisions of Section 2A-49, and as an additional remedy and not in lieu thereof, the Director of Health may cause appropriate proceedings to be brought within any court of competent jurisdiction against any person or persons responsible for any violation of the provisions of this chapter for such injunctive orders or other relief as may be appropriate to the enforcement of the provisions of this chapter, it being deemed by the legislative body of the City of Springfield, Missouri, that any violation of the provisions of this chapter are public nuisances and should be abated thereas.

(9.0)

ARTICLE XX

TEST METHODS AND TABLES

(9.0) Sec. 2A-51. ASTM Test Method C-24-56, being a method of testing for "Pyrometric Cone Equivalent (PCE) of Refractory Materials".

The ASTM Test Method C-24-56 referred to in Section 2A-2 of this chapter in the definition of "a multi-chamber incinerator" is as follows:

(50.1.2) Sec. 2A-52. Ringelmann Scale.

The Ringelmann Scale as referred to in Section 2A-2 of this chapter under the definition of "Ringelmann Smoke Chart" is as follows:

(9.0) Sec. 2A-53. ASTM Test Method D-271-68, being a method of "Laboratory Sampling and Analysis of Coal and Coke"; ASTM Method D-2015-66.

The ASTM Method D-271-68, "Laboratory Sampling and Analysis of Coal and Coke" and the ASTM Method D-2015-66, "Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter", as referred to in Section 2A-12 of this chapter are as follows:

(50.1.1) Sec. 2A-54. Table 1 - Maximum Allowable Particulate Emission; Table 2 - Alternate Method relating to Particulate Emission; Table 3 - Emissions from Existing Foundry Cupolas.

Table 1 referred to in Section 2A-20 relating to Maximum Allowable Particulate Emission and Table 2 referred to in Section 2A-21 relating to an Alternate Determination of Maximum Particulate Emission and Table 3 referred to in Section 2A-24(a) relating to Emissions From Existing Foundry Cupolas are as follows:

TABLE 1

Process Weight Rate		Rate of Emission	Process Weight Rate		Rate of Emission
Lb/Hr	Tons/Hr	Lb/Hr	Lb/Hr	Tons/Hr	Lb/Hr
100	0.05	0.551	16,000	8.00	16.5
200	0.10	0.877	18,000	9.00	17.9
400	0.20	1.40	20,000	10.	19.2
600	0.30	1.83	30,000	15.	25.2
800	0.40	2.22	40,000	20.	30.5
1,000	0.50	2.58	50,000	25.	35.4
1,500	0.75	3.38	60,000	30.	40.0
2,000	1.00	4.10	70,000	35.	41.3
2,500	1.25	4.76	80,000	40.	42.5
3,000	1.50	5.38	90,000	45.	43.6
3,500	1.75	5.96	100,000	50.	44.6
4,000	2.00	6.52	120,000	60.	46.3
5,000	2.50	7.58	140,000	70.	47.8
6,000	3.00	8.56	160,000	80.	49.0
7,000	3.50	9.49	200,000	100.	51.2
8,000	4.00	10.4	1,000,000	500.	69.0
9,000	4.50	11.2	2,000,000	1,000.	77.6
10,000	5.00	12.0	6,000,000	3,000.	92.7
12,000	6.00	13.6			

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E = 4.10 P^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$, where E = rate of emission in

lb/hr and P = process weight rate in tons/hr.

TABLE 2

Source Gas Volume SCFM[a]	Concentration GR/SCF[b]
7,000 or less	0.100
8,000	0.096
9,000	0.092
10,000	0.089
20,000	0.071
30,000	0.062
40,000	0.057
50,000	0.053
60,000	0.050
80,000	0.045
100,000	0.042
120,000	0.040
140,000	0.038
160,000	0.036
180,000	0.035
200,000	0.034
300,000	0.030
400,000	0.027
500,000	0.025
600,000	0.024
800,000	0.021
1,000,000 or more	0.020

TABLE 3

Process Weight Per Hour lbs.	Maximal Allowable Discharge Per Hour lbs.
1,000	3.05
2,000	4.70
3,000	6.35
4,000	8.00
5,000	9.65
6,000	11.30
7,000	12.90
8,000	14.30
9,000	15.50
10,000	16.65
12,000	18.70
14,000	20.15
16,000	21.60
18,000	22.80
20,000	24.00
30,000	30.00
40,000	36.00
50,000	42.00
60,000	48.00
70,000	49.00
80,000	50.50
90,000	51.60
100,000	52.60

(50.1) Sec. 2A-55. ASTM Method PTC-21-1941 on "Dust Separating Apparatus".

The ASTM Test Method PTC-31-1941 on "Dust Separating Apparatus" referred to in Section 2A-25 of this chapter is as follows:

(50.1) Sec. 2A-56. ASTM Method PTC-27-1957 on "Determining Dust Concentration in a Gas Stream".

ASTM Test Method PTC-27-1957 on "Determining Dust Concentration in a Gas Stream" referred to in Section 2A-25 of this chapter is as follows:

(2.0) Section 2 - This ordinance shall be in full force and effect from and after the 90th day following the date of passage hereof.

Passed at meeting: July 14, 1969

KANSAS CITY AIR POLLUTION REGULATIONS

(2.0) ARTICLE III.

AIR POLLUTION

(2.0) Sec. 18.82 Short Title.

The article shall be known and may be cited as the Air Pollution Control Code.

(1.0) Sec. 18.83 Definitions.

The terms as used in this article shall have the following meaning:

1. Air contaminant -- Any particulate matter, gas, or vapor (exclusive of water vapor), including but not limited to smoke, charred paper, dust, soot, grime, carbon or any other particulate matter, or irritating odorous matter, fumes or gases, or any combination thereof.

2. Air contaminant source -- Any source of emission of an air contaminant whether privately or publicly owned or operated.

3. Air pollution -- The presence in the ambient air of one or more air contaminants in quantities, of characteristics and of a duration which directly and proximately cause or contribute to injury to human, animal or plant life or health or to property, or which unreasonably interfere with the enjoyment of life or use of property.

4. Air pollution control device -- Any method, process or equipment which removes, reduces or renders less obnoxious air contaminants emitted into the ambient air.

5. Ambient air -- All space outside of buildings, stacks or exterior ducts.

6. ASTM -- American Society for Testing Materials, 1916 Race Street, Philadelphia, Pennsylvania.

7a. Advisory board -- Air Pollution Control Advisory Board.

7b. Appeal board -- Air Pollution Control Board of Appeals.

8. BTU -- British Thermal Unit(s).

9. City -- City of Kansas City, Missouri.

10. Director -- The director of the department of city government assigned responsibility for the Air Pollution Control Program.

11. Existing source -- Any stationary source other than a new source.

12. Fuel burning equipment for indirect heating -- A device where the combustion of fuels to produce usable heat is transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to, the products of combustion.

13. Incinerator -- Any article, machine, equipment, contrivance, structure,or part of a structure used to burn refuse or to process refuse material by burning other than open burning as defined herein.

14. Modification -- Any physical change in, or change in method of operation, of a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.

15. Multiple chamber incinerator -- Any article, machine, equipment, contrivance, structure or part of a structure, used to dispose of combustible refuse by burning, consisting of three or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts and employing adequate design parameters necessary for maximum combustion of the material to be burned. The refractories shall have a Pyrometric Cone Equivalent of at least 31, tested according to the method described in the American Society for Testing Materials, Method C-24-56.

16. New source -- Any stationary source the construction or modification of which is started after the effective date of this ordinance.

17. Open burning -- The burning of any materials wherein air contaminants resulting from combustion are emitted directly into the ambient air without passing through a stack or chimney from an enclosed chamber. For the purposes of this definition, a chamber shall be regarded as enclosed, when during the time combustion takes place, only such apertures, ducts, stacks, flues or chimneys as are necessary to provide combustion air and to permit the escape of exhaust gases are open.

18. Particulate matter -- Any material, except uncombined water, that exists in a finely divided form as a liquid or solid at standard conditions.

19. Person -- Any individual, partnership, co-partnership, firm, company, public or private corporation, association, joint stock company, trust, estate, political subdivision, or any federal or state governmental agency, board, department or bureau, or any other legal entity whatever which is recognized by law as the subject of rights and duties.

20. Premises -- Land, improvements and the ambient air above such land or improvements.

21. Process -- Any reaction operation, or treatment, the equipment used in connection therewith, and all methods or forms of manufacturing or processing that may emit any air contaminant.

22. Process weight -- The total weight of all material introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

23. Refuse -- Garbage, rubbish, trade wastes, leaves, salvageable material, agricultural wastes, or other wastes.

24. Residual fuel oil -- Fuel oil variously known as Bunker C.PS 400 and Number 6 as defined in ASTM D 396 487 (1959).

25. Ringelmann Chart -- "Ringelmann's Scale for Grading the Density of Smoke" as published in U.S. Bureau of Mines Information Circular 8333.

26. Salvage operation -- Any business, trade, industry or other activity conducted in whole or in part for the purpose of salvaging or reclaiming any product or material.

27. Smoke -- Small gas-borne particles, resulting from combustion, consisting of carbon, ash, and other material.

28. Source operation -- The last operation preceding the emission of an air contaminant, which operation (a) results in the separation of the air contaminant from the process materials or in the conversion of the process materials into air contaminants, as in the case of combustion fuel; and (b) is not principally an air pollution abatement operation.

29. Standard conditions -- A gas temperature of sixty (60) degrees Fahrenheit and a gas pressure of 14.7 pounds per square inch absolute.

30. Stationary source -- Any building, structure, facility, or installation which emits or may emit any air pollutant.

31. Trade waste -- Solid, liquid, or gaseous material resulting from the construction or the prosecution of any business, trade, industry or demolition operation, including but not limited to wood, plastics, cartons, grease, oil, chemicals, and cinders.

(15.0) Sec. 18.84. Administration and enforcement.

A. Director

The director shall administer the provisions of this article.

B. Hearings by Director

1. General provisions.

If, in the opinion of the director, any investigation hereunder indicates that a violation of this article may exist, he may order a hearing. In such event the director shall issue and cause to be served upon the person alleged to be in violation, a written receipted notice of complaint, which shall specify the provision of this article, including any regulation hereunder, which such person is alleged to be in violation of, and a statement of the manner, and the extent to which such person is alleged to be in violation of this article. Such notice shall require such person to answer the complaint at a formal hearing before the director at a time not less than fifteen (15) days after the date of such notice. After such formal hearing, the director shall issue such order as he deems appropriate to eliminate any violation found by the director and compel compliance with regulation or other provision of this article which such person shall have been found by the director to have violated.

2. Appeals.

Any order issued by the director shall become final and binding unless the person against whom such order is issued shall within fifteen (15) days after the date of issuance of such order request the director, in writing, to refer such order to the board as hereinafter provided. Such appeal shall stay enforcement of such order issued by the director.

C. Inspections

The director, may, upon reasonable notice, enter and inspect any facilities constituting any air contaminant source located on any premises, at any reasonable time for the purpose of ascertaining the state of compliance with the regulations made part of this article and making tests and samples as provided for in subsection (D) hereof. No person shall refuse entry or access to the director, or his representative, upon presentation of appropriate identification and authority, nor shall any person obstruct, hamper or interfere with such tests or sampling. Upon request, the owner or operator of the premises shall receive a report setting forth all facts found which relate to compliance status as a result of such tests and sampling.

D. Sampling and Testing

1. General provisions.

The director is hereby authorized to conduct or cause to be conducted any test or sampling of the operation of any equipment which, in his opinion, may result in emissions in violation of any regulation in effect hereunder. Any test or sampling may be conducted by any method or those methods listed in the Federal Register December 23, 1971 or as revised, other than the particular method as may be specified in any regulation hereunder, provided such substitute method is technically equivalent and mutually agreed to in writing by the director and the operator of the air contaminant source involved. All tests shall be conducted by reputable, qualified personnel. Both the director and the operator of the equipment tested may be present at the test and each shall be entitled to a copy of the test results, in writing, and signed by the person responsible for the tests.

2. Testing by operator.

Upon notification by the director to the operator of any air contaminant source that emission tests are considered necessary, such person may elect to conduct such tests and sampling at his own expense in which event such person shall notify the director of such election and of the time and date such person proposes to conduct such tests and sampling. In any such test conducted by such person, the director may require that his duly authorized representative be present during the conduct of such tests and the taking of such samples.

3. Testing by director.

Tests or samplings made by the operator shall not prohibit the director, if the director so elects, from making independent tests or samplings; the cost and expenses thereof to be paid by the City. Upon request of the director, the person responsible for the source to be tested shall provide necessary test ports in stacks or ducts and such other safe and proper facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants, and shall cooperate with the director so as to permit such tests to be made, provided that such inspections, sampling and tests shall not unreasonably interfere with normal operation of the plant. In either event, the director and the person who is the operator of such equipment shall be entitled to a complete detailed report of all tests and sampling.

E. Reports

1. Emission inventory.

The director may require persons owning or responsible for the operation of any air contaminant source to file reports and information relating to the rate, period of emission, and composition of effluent from any air contaminant source including the location of such source, size and height of air contaminant outlets, processes employed, fuels used, and the nature and time periods and duration of emission, and such other relevant information as is available to such person or reasonably capable of being assembled from the normal operating records of such person, within 30 days after having received a certified notification by the director. Such information shall be used to maintain an emission inventory.

2. Schedule of compliance.

Any person owning or responsible for the operation of any existing stationary source not in compliance on the effective date of this article shall submit to the director in a form and manner satisfactory to him, a program and schedule for achieving compliance, such program and schedule to contain a date on or before which full compliance will be attained, interim dates for achieving discrete steps in the process of installing appropriate air pollution control devices, and such other information as the director may require. If approved by the director, such date will be the date on which the person shall comply. Any compliance schedule which will exceed a period of one year must be approved by the board. In the event the director determines that:

(a) The person is taking all reasonable actions available to him to comply with the time limitations, but such compliance is not possible; or

(b) The delay is caused by conditions beyond the jurisdiction and control of such person;

then the director may grant one (1) additional extension of time not to exceed 90 days. Any extension of time to exceed 90 days must be approved by the board.

F. Enforcement; Order of Abatement.

1. Issuance of orders.

   Whenever the director determines that the terms or conditions of this article have been violated, he may order that the violation be abated within a reasonable time to be prescribed by him; such order to be served by personal service, certified, or registered mail.

2. Prosecution in Municipal Courts.

   In the event that a violation of this article occurs, the director may request the city counselor to file a prosecution in the municipal courts.

3. Proceedings in Circuit Court.

   The city counselor is hereby empowered and at his own discretion is hereby authorized to institute proceedings in the circuit court in the name of the city in order to enforce the terms and conditions of this article.

4. Stop Orders.

   Upon notice of the director that work on the installation of a machine, contrivance, equipment, device, process or operation that may cause the emission of air contaminants is being prosecuted without a permit where such permit is required, or without having been registered where such registration is required or not in accordance with plans or specifications or data submitted with the application for such permit or such registration or contrary to any final order of the board, such work shall be immediately stopped. The stop-work order shall be in writing and shall be served upon the person responsible for the premises on which the work is occurring or upon the person doing the work, and shall state the conditions under which the work may be resumed.

5. Violation of Stop Order.

   Any person who shall continue any work in or about such machine, contrivance, equipment, device, process or operation after having been served with a stop-work order except such work as he is directed to perform to remove a violation or unsafe condition, shall be subject to section 18.102.1.

(51.13) Sec. 18.85. Open burning restrictions.

A. Refuse Burning Restrictions.

1. No person shall dispose of refuse by open burning, or cause, allow or permit open burning of refuse.

2. Exception. In Zoning District R-A, if municipal refuse collection is not provided for by the city, open burning of household refuse, originating at the site, from a single-family residence shall not be in violation of subsection (A)(1) of this section. Any such open burning shall be permitted only between the hours of 10:00 a.m. and 6:00 p.m.

B. Prohibition of Salvage Operations by Open Burning.

No person shall cause, allow or permit the conduct of a salvage operation by open burning.

C. Restrictions on Open Burning of Trade Wastes.

1. Prohibited.

No person shall cause, allow or permit the disposal of trade wastes by open burning except as provided in this section.

2. Exceptions.

The open burning of trade wastes may be permitted when it can be shown that such open burning is necessary and in the public interest. Any person intending to engage in open burning of trade wastes shall file an application on a form furnished by the director and comply with terms and conditions outlined in writing by the director.

3. Fire prevention permit.

Upon written approval of the application by the director, the applicant may be issued a permit to open burn trade wastes by the chief inspector of fire prevention.

4. Revocation of permit.

Any violation of the provisions relating to open burning of trade waste shall be grounds for revocation of the trade waste burning permit by the director or the chief inspector of fire prevention.

D. This Section 18.85 Shall Not Apply to the Following:

1. Fires set in connection with agricultural operations related to the growing or harvesting of crops. For the purpose of this section 18.85, botanical nursery operations shall not be considered as agricultural operations.

2. The burning of gaseous trade wastes in refinery or industrial chemical safety flares. Full smokeless-tip combustion, steam addition, or other flare smoke control methods approved by the director shall be used, and emissions may not be of a shade or density equal to or greater than No. 1 on the Ringelmann Chart.

3. Fires used for recreational purposes, or fires used for the non-commercial preparation of food such as by barbecuing.

(50.1.1) Sec. 18.86. Restriction of Particulate Matter.

A. Restriction of Emission of Particulate Matter from Industrial Processes.

1. General Provisions.

a. This section applies to any operation, process, or activity except the burning of fuel for indirect heating in which the products of combustion do not come into direct contact with process materials and except the burning of refuse and except the processing of salvageable material by burning.

b. Process weight means the total weight of all materials introduced into a source operation, including solid fuels, but excluding liquids and gases used solely as fuels, and excluding air introduced for purposes of combustion.

Process weight rate means a rate established as follows:

(i) For continuous or long-run steady-state source operations, the total process weight for the entire period of continuous operation or for a typical portion thereof, divided by the number of hours of such period or portion thereof.

(ii) For cyclical or batch source operations, the total process weight for a period which covers a complete operation or an integral number of cycles, divided by the hours of actual process operation during such period.

Where the nature of any process or operation or the design of any equipment is such as to permit more than one interpretation of this section, that interpretation which results in the minimum value for allowable emissions shall apply.

c. Emission tests relating to this regulation shall be made following those methods listed in the Federal Register December 23, 1971, or as revised. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the director.

2. Emission limitations.

a. Except as provided for in subsection (A)(3) of this section, no person shall cause, suffer, allow or permit the emission of particulate matter in any one hour from any source in excess of the amount shown in Table 1 for the process weight allocated to such source.

TABLE I

Process Weight Rate		Rate of Emission
Lb./Hr.	Tons/hr.	Lb./Hr.
100	0.05	0.551
200	0.10	0.877
400	0.20	1.40
600	0.30	1.83
800	0.40	2.22
1,000	0.50	2.58
1,500	0.75	3.38
2,000	1.00	4.10
2,500	1.25	4.76
3,000	1.50	5.38
3,500	1.75	5.96
4,000	2.00	6.52
5,000	2.50	7.58
6,000	3.00	8.56
7,000	3.50	9.49
8,000	4.00	10.4
9,000	4.50	11.2
10,000	5.00	12.0
12,000	6.00	13.6
16,000	8.00	16.5

TABLE I

CONTINUED

Lb./Hr.	Tons/Hr.	Lb./Hr.
18,000	9.	17.9
20,000	10.	19.2
30,000	15.	25.2
40,000	20.	30.5
50,000	25.	35.4
60,000	30.	40.0
70,000	35.	41.3
80,000	40.	42.5
90,000	45.	43.6
100,000	50.	44.6
120,000	60.	46.3
140,000	70.	47.8
160,000	80.	49.0
200,000	100.	51.2
1,000,000	500.	69.0
2,000,000	1000.	77.6
6,000,000	3000.	92.7

Interpolation of the data in this table for process weight rates up to 60,000 lb/hr shall be accomplished by use of the equation $E = 4.10\ P^{0.67}$, and interpolation and extrapolation of the data for process weight rates in excess of 60,000 lb/hr shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$, where E = rate of emission in lb/hr and P = process weight rate in tons/hr.

3. Exceptions.

   a. The provisions of subsection (2) of this section shall not apply to existing grey iron jobbing cupolas. For purposes of this section a jobbing cupola is defined as a cupola which has a single melting cycle operated no more than 10 hours in any consecutive 24 hours and no more than 50 hours in any consecutive 7 days.

      (i) All existing grey iron jobbing cupolas shall be equipped with gas cleaning devices and so operated as to remove not less than eighty-five percent (85%) by weight of all the particulate matter in the cupola discharge gases, or release not more than 0.4 grain of particulate matter per standard cubic foot of discharge gas, whichever is more stringent.

(ii) All gases, vapors and gas entrained effluents from such cupolas shall be incinerated at a temperature not less than 1200° Fahrenheit for a period of not less than 0.3 seconds.

b. The provisions of subsection (2) of this section shall not apply to a process during periods when a new fire is being built or during the start up of the operation.

B. Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating.

1. General Provisions.

a. This section applies to installations in which fuel is burned for the primary purpose of producing steam, hot water, or hot air or other indirect heating of liquids, gases, or solids and, in the course of doing so, the products of combustion do not come into direct contact with process materials. Fuels include those such as coal, coke, lignite, coke breeze, gas, fuel oil, and wood, but do not include refuse. When any products or by-products of a manufacturing process are burned for the same purpose or in conjunction with any fuel, the same maximum emission limitations shall apply.

b. The heat content of coal shall be determined according to ASTM method D-271-64 "Laboratory Sampling and Analysis of Coal and Coke" or ASTM method D-2015-66 "Gross Calorific Value of Solid Fuel by the Adiabatic Bomb Calorimeter." The heat content of oil shall be determined according to ASTM method D-240-64 "Heat of Combustion of Liquid Hydrocarbons by Bomb Calorimeter". The three publications cited in this subsection (1)(b) are hereby made part of this section by reference.

c. For purposes of this section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or stacks. The heat input value used shall be the equipment manufacturer's or designer's guaranteed maximum input, whichever is greater. The total heat input of all fuel burning units at a plant or on a premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted.

d. The amount of particulate matter emitted shall be measured according to those methods listed in the Federal Register December 23, 1971 or as revised. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the director.

2. Emission limitations.

No person may cause, allow or permit the emission of particulate matter from such fuel burning installations in excess of that specified in the following schedule (see Graph I which is included for illustrative purpose only):

a. 0.60 pounds for each million BTU input if the equipment has a capacity rating of 10 million or less BTU input per hour. If the capacity rating of the fuel burning equipment is more than 10 million BTU input per hour, the amount of particulate matter which may be emitted for each million BTU input shall decrease as the capacity rating of the fuel burning equipment increases, as follows:

    1. No more than 0.41 pounds for each million BTU input from equipment having a capacity rating of 50 million BTU per hour input;

    2. No more than 0.35 pounds for each million BTU input from equipment having a capacity rating of 100 million BTU per hour input;

    3. No more than 0.24 pounds for each million BTU input from equipment having a capacity rating of 500 million BTU per hour input;

    4. No more than 0.21 pounds for each million BTU input from equipment having a capacity rating of 1,000 million BTU per hour input;

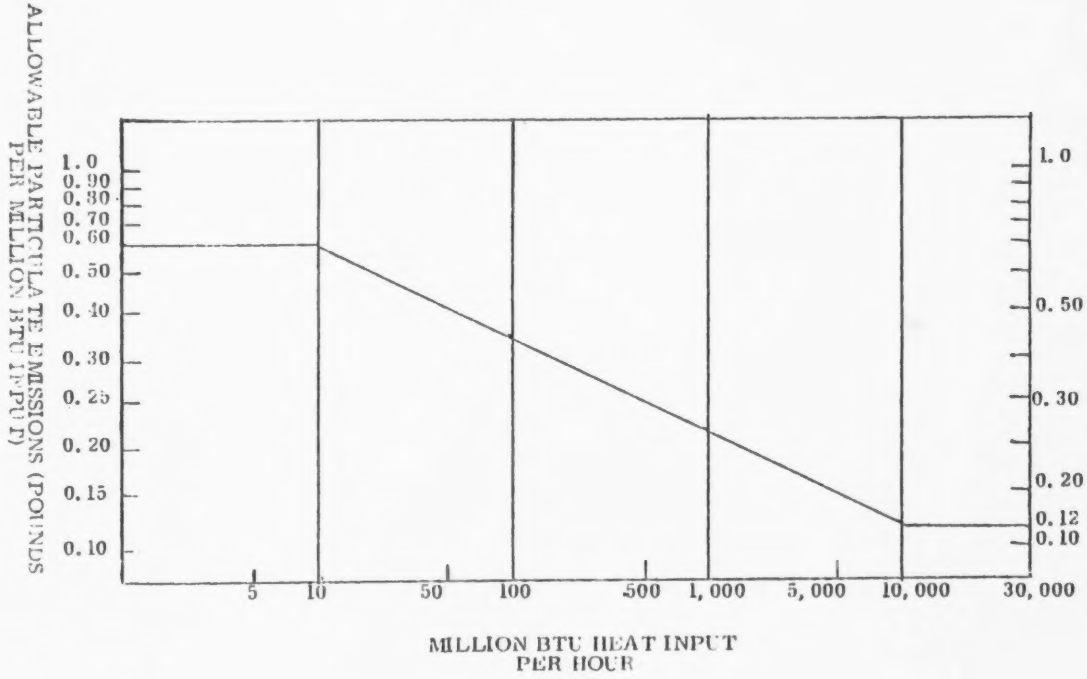
    5. No more than 0.17 pounds for each million BTU input from equipment having a capacity rating of 2,000 million BTU per hour input;

    6. No more than 0.14 pounds for each million BTU input from equipment having a capacity rating of 5,000 million BTU per hour input;

    7. No more than 0.13 pounds for each million BTU input from equipment having a capacity rating of 7,500 million BTU per hour input;

    8. No more than 0.12 pounds for each million BTU input from equipment having a capacity rating of 10,000 million BTU per hour input or more.

MAXIMUM ALLOWABLE PARTICULATE EMISSION POUNDS PARTICULATE PER MILLION BTU PER HOUR HEAT INPUT



GRAPH I

The amount of particulate matter which may be emitted from fuel burning equipment having an intermediate capacity rating shall be determined either by linear interpolation, or by use of the following equation:

$$\text{Log } Y = -0.23299 \text{ Log } X + 1.4091 \text{ (where } 10\text{x}10^{6} \leq X \leq 10{,}000 \times 10^{6}\text{)}$$

Where X represents each million BTU per hour input, and Y represents the allowable pounds of emissions per million BTU.

3. Option on equipment use.

The operator of equipment used for indirect heating in any plant may, at his option, elect to eliminate, for the purpose of determining compliance with the provisions of this section, any fuel burning units normally scheduled to operate less than 1,500 hours per year, provided such units are equipped with air pollution control equipment having a collection efficiency of not less than eighty-five percent (85%), in which case such units shall be deemed to comply with the provisions of this section in any multiple unit plant shall be treated as a separate installation from other units in such plant. The director may require such operator to submit proposed operating schedules of such units in advance and reports of actual operating schedules for any year.

4. Exceptions

Compliance with the provisions of this subsection 18.86 (B) shall not be determined during periods when a new fire is being built; during start up, change of load, fuel or other operating conditions; during an operations breakdown or other emergency conditions; while air pollution control equipment is shut down for maintenance; or during sootblowing; but shall be determined during steadystate conditions.

C. Preventing Particulate Matter from Becoming Air-Borne

1. Handling, transporting, storing.

No person may cause or permit the handling, or transporting or storage of any material in a manner which may allow particulate matter to become air-borne in such quantities and concentrations that it remains visible in the ambient air beyond where it originates and that its presence may be found beyond the premises where it originates and that it has particulate matter shown to be larger than (40) forty microns in size. The size of the particulate matter shall be determined by microscopy or any other technique approved by the director and proven to be equally accurate.

2. Construction, use, repair, demolition.

   No person may cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming air-borne so that it remains visible beyond the premises where it originates or that its presence may be found beyond the premises where it originates. The director may require such reasonable measures as may be necessary to prevent particulate matter from becoming air-borne, including but not limited to paving or frequent cleaning of roads, driveways and parking lots; application of dustfree surfaces; application of water; and the planting and maintenance of vegetative ground cover.

3. Property-line standard limitations for particulate matter becoming air-borne.

   No person shall cause, suffer, or permit the emission of any particulate matter so as to cause concentrations of particulate matter at any inhabited place to exceed any one of the following:

a. Suspended Particulates - 80 micrograms/m^3	6-month geometric mean
(High-Volume Sampler) - 200 micrograms/m^3	2-hour arithmetic average for not less than five two-hour sampling periods within any one year. No more than 3 samples shall be taken during any 24-hour period.

b. Soiling Index	0.4 Coh/1000 lineal feet	6-month geometric mean
(AISI Paper tape sampler)	1.0 Coh/1000 lineal feet	8-hour arithmetic average

4. This subsection (c) shall not apply to farming operations.

(50.1.2) Sec. 18.87. Restrictions of emissions of visible air contaminants.

A. Restrictions Applicable to all Installations.

1. Emission limitations.

No person may discharge into the ambient air from any single source of emission whatsoever any air contaminant:

(a) Of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than that designated as No. 1 on the Ringelmann Chart.

B. Altered or Controlled Sources.

1. Emission Limitations.

Any person who has, after April 26, 1968 and before the effective date of this ordinance, altered or controlled a single source, as substantiated by design data, so as not to discharge into the ambient air,air contaminants:

(a) Of a shade or density equal to or darker than that designated as No. 2 on the Ringelmann Chart, or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke designated as No. 2 on the Ringelmann Chart,

shall be excepted from the requirements of subsection (A) hereof (provided that this exception shall not be effective after July 31, 1975).

C. Exceptions.

1. Time Allowance.

A person may discharge into the ambient air from any single source of emission for a period or periods aggregating not more than six minutes in any sixty minutes air contaminants:

(a) Of a shade or density not equal to nor darker than that designated as No. 3 on the Ringelmann Chart; or

(b) Of such opacity as to obscure an observer's view to a degree not equal to nor greater than that designated as No. 3 on the Ringelmann Chart.

For the purposes of this subsection (C) (1) the director may, for a specific source and for special conditions, approve any other schedule.

2. Presence of uncombined water.

Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of subsection (A) and (B) of this section, such subsection shall not apply.

3. Miscellaneous.

This section shall not apply to the following:

(a) Internal combustion engines, except as provided in section 18.89.

(b) Wood burning stoves or fireplaces in dwellings.

(c) Fires used for recreational purposes or fires used for the noncommercial preparation of food by barbecuing.

(d) Smoke generators used for training air pollution control inspectors.

4. Incinerators excepted.

This section shall not apply to incinerators.

D. Method of Measurement.

The Ringelmann Chart shall be the standard in grading the shade or opacity of visible air contaminant emissions. The director may with the consent of the source operator employ any other means of measurement which give comparable results of greater accuracy.

(50.6) Sec. 18.88. Restriction of Emission of Odors.

No person may cause, permit or allow the emission of odorous matter in such concentrations and frequencies or for such durations that such odor can be perceived beyond the property line of the odor source when one (1) volume of odorous air is diluted with seven (7) volumes of odor-free air for two (2) separate trials not less than 15 minutes apart within the period of one (1) hour; or

No person may cause, permit or allow the emission of odorous matter in such concentrations and frequencies or for such durations that such odor can be perceived at the point of complaint in a residential area when two (2) volumes of odorous air is diluted with one (1) volume of odor free air for two (2) separate trials not less than 15 minutes apart within the period of one (1) hour.

These measurements may be made with a Scentometer as manufactured by the Barnebey-Cheney Company or by a similar device, as recognized by the director, that will give equivalent results.

(12.0)
(50.1.2) Sec. 18.89. Emission of Visible Air Contaminants From Internal Combustion Engines.

A. No person shall cause or permit the emissions of visible air contaminants from any internal combustion engine for more than five consecutive seconds at any one time.

B. Where the presence of uncombined water is the only reason for failure of an emission to meet the requirements of this regulation, the provisions of this regulations shall not apply.

(50.2) Sec. 18.90. Emission of Sulfur Compounds in Certain Amounts and Manner Restricted.

1. No person may cause or permit the emission of sulfur dioxide from any premises in such manner and amounts that the concentrations and frequencies exceed those shown in the following table in the ambient air at any occupied place beyond the premises on which the source is located:

Concentration[a]	Averaging Time	Maximum Allowable Frequency
.25 ppm or more	1 hour	Once in any 4 days at any sampling site.
.07 ppm or more	24 hours	Once in any 90 days at any sampling site.

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[a] parts per million by volume

2. If the concentrations and frequencies specified in subsection (1) of this section 18.90 are exceeded, each source which contributes to such concentrations and frequencies, and which emits 1,000 pounds or more of sulfur dioxide per hour shall be required to reduce its emissions by an amount specified by the director. Each source owner or operator shall file an emission reduction plan within 90 days after the date on which such requirement is made by the director. The emission reduction plan shall include a description of the process modifications, control equipment to be installed, or other measures to be taken to comply with the emission reduction required by the director. Implementation of the plan shall take place within one year after the date on which the plan is approved by the director.

(51.9) Sec. 18.91. Incinerators.

A. General Provisions.

1. All incinerators.

This section shall apply to all incinerators.

2. Design requirements.

No incinerator shall be used for the burning of refuse unless such incinerator is a multiple chamber incinerator. Existing incinerators which are not multiple chamber incinerators may be altered, modified or rebuilt as may be necessary to meet the requirements of this section. The director may approve any other alteration or modification to an existing incinerator if such be found by him to be equally effective for the purpose of air pollution control as would result from the operation of a multiple chamber incinerator. All new incinerators shall be multiple chamber incinerators, provided that the director may approve any other kind of incinerator if he finds in advance of construction or installation that such other kind of incinerator is equally effective for purposes of air pollution control as an approved multiple chamber incinerator.

3. Test Schedule.

Within thirty (30) days after the date on which installation or construction of an incinerator is completed, the installer shall file a request with the director to schedule the performance tests provided in subsection (C) of this section. If the results of the performance tests indicate that the incinerator is not operating in compliance with subsection (B) of this section, no person may cause or permit further operation of the incinerator, except for additional tests as outlined in subsection (C) of this section until approval is received from the director.

4. Capacity.

The burning capacity of an incinerator shall be the manufacturer's or designer's guaranteed maximum rate or such other rate as may be determined by the director in accordance with good engineering practice. In case of conflict, the findings of the director shall govern.

B. Restriction of Emissions From Incinerators.

1. Emission Limitations.

No person shall cause or permit the emission of particulate matter from the chimney, stack or vent of any incinerator:

(a) With a refuse burning capacity of 4,166 or more pounds per hour: in excess of 0.10 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

(b) With a refuse burning capacity less than 4,166: in excess of 0.2 grains of particulate matter per standard dry cubic foot of exhaust gas, corrected to 12 percent (12%) carbon dioxide.

(c) Of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to a degree equal to or greater than that designated as No. 1 on the Ringelmann Chart.

2. Odor Control.

All incinerators shall be designed and operated so that all gases, vapors and entrained effluents shall while passing through the final combustion chamber, be maintained at a temperature adequate to prevent the emission of objectionable odors. Provided however, that the director shall approve any other method of odor control which he determines is equally effective.

C. Performance Testing.

1. Representative Sample.

Refuse burned in conjuction with the performance tests specified in this section shall be a representative sample of the refuse normally generated by the operation which the incinerator is intended to serve.

2. Procedure.

The amount of particulate matter emitted from any incinerator shall be determined according to those methods listed in the Federal Register December 23, 1971 or as revised. Any other method which is in accordance with good professional practice may be used by mutual consent of the source operator and the director. In calculating the amount of particulate matter in stack gas, the loading shall be adjusted to twelve percent (12%) carbon dioxide in the stack gas. The carbon dioxide produced by burning of the liquid or gaseous fuel in the incinerator shall be excluded from the calculations converting to twelve percent (12%) carbon dioxide. Emissions shall be measured when the incinerator is operating at the burning capacity as defined in subsection (A) (4) of this section or at any greater operating rate requested by the source operator.

3. Compliance.

A performance test to determine compliance with the Ringelmann requirements specified in subsection (B) (1) (c) shall be performed by the director on each new incinerator, and each existing incinerator modified or rebuilt according to the schedule outlined in subsection (D) of this section.

4. When Required.

The performance test specified in subsection (C) (2) of this section may be required on any incinerator, and shall be required for each new incinerator having a burning capacity of 1,000 pounds per hour or greater. The initial performance test shall be performed at the expense of the vendor or operator by an independent testing organization or by any other qualified person subject to approval of the director. The performance test may be observed by the director.

D. Incinerator Installation Permits.

1. Permit Required.

No person shall erect, construct, alter or install any incinerator in any building or other structure or on any premises until a permit has been secured from the director pursuant to a written application therefor, upon forms furnished by the director.

2. Plans and Specifications.

Each application for a permit shall be accompanied by two sets of such drawings, specifications and data as are required to verify that the proposed work will conform to the provisions of this chapter. One set of drawings, specifications and data shall remain on file in the office of the director.

3. Revocation.

Any incinerator erected, constructed, altered or installed contrary to the plans or specifications submitted at the time of permit application shall cause the installation permit to become void.

4. Penalty.

Any person starting work for which a permit is required by this article prior to obtaining a permit shall be deemed guilty of a misdemeanor.

E. Incinerator Operations Permit.

Before any incinerator described in section 18.91 (A) may be operated or used, a written permit shall be obtained from the director. No permit to operate or use shall be granted by the director for any incinerator described in section 18.91 (A) constructed or installed without authorization as required by section 18.91 (D), until the information required is presented to the director and if necessary said incinerator be made to conform to the standards set forth in section 18.91 (A) and elsewhere in the Air Pollution Control Code.

(10.0) Sec. 18.92. Review of New Sources and Modifications.

A. Approval to Construct or Modify.

1. No person shall construct or cause the construction of any new source or modify any existing source without first

obtaining approval from the director of the location and design of such new or modified source. Application for approval to construct a new or modify an existing source shall be made by the owner or operator thereof on forms furnished by the director. A separate application is required for each new or modified source subject to rules and regulations.

2. Each application for approval to construct a new or modify an existing source shall be accompanied by siting information, plans, descriptions, specifications and drawings showing the design of the new or modified source and the manner in which it will be operated and controlled.

3. Any additional information, plans, specifications, evidence or documentation that the director may require shall be furnished upon request.

B. Standards for Granting Approval to Construct or Modify.

No approval to construct a new source or modify an existing source unless the applicant shows to the satisfaction of the director:

1. The new or modified source will operate without causing a violation of applicable rules and regulations, and

2. The new or modified source will not prevent or interfere with attainment or maintenance of any applicable ambient air quality standards.

C. Action on Applications to Construct or Modify.

The director shall act within 60 days on an application and shall notify the applicant in writing of his approval, conditional approval, or denial of the application, and shall set forth in writing in any notice of denial his reasons therefore.

D. Conditional Approval.

The director may impose any reasonable conditions upon an approval, which include but is not limited to:

1. Installation of sampling ports of such size, number, and location as the director may require,

2. Provide safe access to each port,

3. Installation of monitoring equipment to measure and record quantities, and

4. Any other sampling and testing facilities as may be necessary.

E. Cancellation of Approval.

The director may cancel any permit to construct or modify a source, if such construction or modification is not started within two (2) years from the date of issuance, or if construction or modification is suspended for one (1) year.

(3.0) Sec. 18.93. Permit to Operate; Notification and Record Keeping.

A. No person shall operate or cause the operation of any new or modified source, the construction or modification of which has been approved by the director under (C) or (D) above, without obtaining from the director a permit to operate. Application for a permit to operate a new source shall serve as notification of anticipated start-up and shall be made not more than 60 days nor less than 30 days prior to the anticipated start-up of the operation.

B. The owner or operator of a new or modified source shall notify the director in writing within 15 days prior to the actual start-up of the new or modified source.

C. Any owner or operator of any new or modified source subject to the provisions of this part shall maintain for a period of two (2) years a record of the occurrence and duration of any start-up, shutdown, or malfunction in operation of the new or modified source.

D. Any owner or operator who shall operate or cause the operation of a source where the director denies or revokes a permit to operate shall be subject to such fines and penalties as provided for in this ordinance.

E. No permit to operate shall be granted unless the applicant shows to the satisfaction of the director that the source is in compliance with rules and regulations applicable on or before the date the construction permit was issued. Before a permit to operate is granted, the applicant, if required by the director, shall conduct at the expense of the owner performance tests in accordance with methods approved by the director. The director may monitor such tests and may also conduct performance tests.

F. The director shall act within 60 days after start-up on an application for a permit to operate a new or modified source, and shall notify the applicant, in writing, of his approval, conditional approval, or denial of the application and shall set forth in any notice of denial his reasons therefore.

G. The director may impose any reasonable conditions on a permit to operate.

H. The director may suspend or revoke a permit to operate for violation of applicable rules and regulations. Such suspension or revocation of a permit to operate shall become final ten (10) days after service of notice on the holder of the permit. A permit to operate which has been revoked pursuant to these regulations shall be surrendered forthwith to the director.

I. Permits to operate are not transferable.

J. Approval to construct, modify or operate shall not be required for:

1. Installation, alteration or repair of an air pollutants detector, air pollutants recorder, combustion controller or combustion shutoff.

2. Air conditioning or ventilating equipment or systems not designed to remove air pollutants generated by or released from equipment.

3. Fuel burning equipment, other than smoke house generators, which; uses gas for fuel for space heating, air conditioning or heating water; or is used in a private dwelling; or has a heat input of not more than 350,000 BTU per hour.

4. Mobile internal combustion engines,

5. Laboratory equipment used exclusively for chemical or physical analyses, and

6. Other sources of minor significance specified by the director.

K. Possession of a permit to construct or modify or a permit to operate shall not relieve any person of the responsibility to comply with applicable emission limitations or other regulations.

(16.0) Sec. 18.94. Air Pollution Control Board of Appeals.

A. Appointed.

1. Appeal Board

The mayor, with the approval of the city council, shall appoint an air pollution control boards of appeals, which shall consist of five (5) members. One member shall be a professional engineer registered as such under the Missouri State Registration Law, one shall be associated with heavy industry, one shall be associated with organized labor, and two (2) persons representing the public interest. All members shall be appointed for a term of (4) years, except that for the initially appointed appeal board, one member shall serve for one (1) year, one member for two (2) years, one member for three (3) years and two members for (4) four years. Each member shall be a person of good reputation, who shall have been a resident of Kansas City, Missouri continuously for at least three (3) years prior to his appointment. No member of the appeal board shall be an officer or an employee of any governmental agency. Vacancies on the appeal board shall be filled for the unexpired term by the mayor, with the approval of the city council. Members appointed to fill vacancies shall have qualifications which their predecessors were required to possess.

2. Chairman.

The mayor shall designate one of the members of the appeal board to serve as chairman.

3. Secretary.

The chief of the Air Pollution Control Division shall serve as secretary to the appeal board for the purpose of administering its affairs and maintaining its records, but the secretary shall have no vote on the appeal board.

B. Actions by Appeal Board.

1. General Provisions:

a. The appeal board shall set all hearings at a time not less than thirty (30) days after request by the director or any person adversely affected or otherwise aggrieved by any order issued by the director. The appeal board shall hear and determine appeals from actions and orders of the director and all petitions for variance. Fifty dollars ($50.00) shall accompany the notice of appeal or the petition for variance.

b. Subject to the provisions of section 18.95 hereof, all hearings held by the appeal board shall be open to the public, and all testimony taken before the appeal board shall be under oath and recorded stenographically, except that the appeal board may require the submission of voluminous or detailed or technical testimony in writing under oath. A transcript of the testimony so recorded shall be made available to any member of the public or to any participant in such hearing upon payment of reasonable charges for transcription thereof.

c. All hearings shall be had before one or more members of the appeal board which shall designate one of the members to act as a hearing office. The member designated by the appeal board to act as a hearing officer may issue in the name of the appeal board, notices of the hearing and subpoenas requiring attendance and testimony of witnesses and production of evidence relevant to any matter involved in such proceedings and administer the oath and affirmations and examine witnesses.

d. Each party to the proceeding may file written arguments and may appear at the hearing in person or by counsel and may make oral arguments, offer testimony or cross-examine witnesses or take any combination of such actions. Any person aggrieved or who would be aggrieved by the emissions from the alleged air contaminant source shall be entitled to appear to testify with respect to such matter, subject to such restrictions and procedures as the appeal board may establish, but shall not be a party to such proceeding. In all proceedings before the appeal board involving variances, and in all appeals from any order issued by the director, the applicant for a variance, or the person or persons to whom such order is directed, and the director shall be the parties in interest.

e. In each such proceeding, each member of the appeal board who renders or joins in rendering an order of the appeal board shall, prior to taking action thereon, either hear all evidence, read the record in full including all the evidence, or personally consider the portions of the record cited or referred to in the arguments or briefs. The parties may, by written stipulation or by oral stipulation in the record at the hearing, waive compliance with the provisions of this subsection.

f. The appeal board shall by its order sustain, reverse or modify any order issued by the director, and shall deny or grant variances upon terms and conditions, as the appeal board deems appropriate, provided that in making its order and determinations the appeal board shall exercise full discretion in weighing the equities involved and the advantages and disadvantages to the owner or operator of the air contaminant source involved and to the public. Every order by the appeal board shall be in writing and approved by at least three (3) members and shall be accompanied by findings of fact and conclusions of law, which shall be stated separately, on which the appeal board bases its order.

g. The appeal board shall issue its order and immediately notify each party to the proceeding, in writing, by certified mail. In cases in which any party is found to have violated any provision of this article the order of the appeal board shall fix a reasonable time for such person or persons to take such measures as may be necessary to prevent subsequent violation.

C. Variances.

1. Petitions.

Any person who owns or is in control, or purports to be in control of any air contaminant source, may submit a petition to the director for a variance from any section of this article governing the quality, nature, duration or extent of discharge of air pollutants from such source. The petition shall be accompanied by the fee provided in (B)(1)(a) supra, and shall include the following information:

a. The name, address and telephone number of the petitioner or other person authorized to receive service of notice.

b. The type of business or activity involved in the application and the street address at which it is conducted.

c. A brief description of the article, machine, equipment or other contrivance or process involved in the application and the emissions occurring therefrom.

d. Each petition shall be signed by the petitioner or by some person on his behalf, and where the person signing is not the petitioner, it shall set forth his authority to sign.

e. The section of this article from which the variance is sought.

f. Such other information and data with respect to such air contaminant source as may be required by the director or the appeal board.

2. Investigation.

The director shall promptly investigate such petition and submit it with a recommendation to the appeal board as to the disposition thereof.

3. Grounds for variance.

The appeal board may grant such variance if it finds that:

a. The emissions occurring or proposed to occur would not endanger human health or safety, and

b. Compliance with the regulations from which the variance is sought would produce serious hardship without equal or greater benefits to the public.

4. Notice.

No variance shall be granted pursuant to this subsection except after publication of notice of the filing of such petition and until the appeal board has considered the relative interests of the petitioner, other owners of property likely to be affected by the discharge and the general public.

5. Renewal.

Variances may be granted for such periods of time, and under such terms and conditions as shall be specified by the appeal board. Variances may be renewed by the appeal board upon application made at least sixty (60) days prior to the expiration of the term. Renewal application shall be considered in the same manner as the initial petition for variance was considered by the appeal board.

6. Conditions.

Such a variance may require a decrease of the emissions during the variance period and the making of periodic reports of an improvement program and on compliance with the terms and conditions attached to the variance. A variance may be revoked or modified for failure to comply with the terms thereof or for failure to make a periodic report, if such is required.

7. Emergencies.

Nothing in this subsection, and no variance or renewal granted pursuant hereto, shall be construed to prevent or limit the application of the emergency provisions and procedures of this article.

(14.0) Sec. 18.95. Confidentiality of records.

No records or information relating to secret processes or trade secrets affecting methods or results of manufacture shall be disclosed to the public, if so requested by the owner or operator thereof, and all such records or information shall be kept confidential. At any public hearing any such confidential information shall, if requested by the owner or operator thereof, be received in camera and kept under seal. Nothing herein shall be construed to prevent the use of records or information by the director in compiling or publishing analyses or summaries relating to the general condition of the ambient atmosphere, or air contaminant emission rates from any air contaminant source.

(2.0) Sec. 18.96. Circumvention.

No person shall willfully cause or permit the installation or use of any device or use any means which cancels or dilutes an emission of an air contaminant which would otherwise violate any section of this article without actually reducing the amount of air contaminant emitted. This section shall not apply when the only violation involved is a violation of a regulation based on the concentration or presence of one or more air contaminants at locations beyond the premises on which such air contaminant source or sources are located.

(2.0) Sec. 18.97. Uncontrollable force or upset conditions.

A. Uncontrollable Force.

No emission which would otherwise be a violation of any section under this article shall be deemed tobe a violation and no liabilities therefor shall be imposed or enforced, ifsuch emission is the result of any act of God, war, labor disturbance, riot, catastrophe, or other case beyond the control of such person.

B. Upset Conditions.

1. General provisions

Emissions exceeding any of the limits established by this article as a direct resultof unavoidable upset conditions in the nature of the process, oprational breakdown, or unavoidable and unforeseeable breakdown of any air pollution control equipment or related operating equiment or as a direct result of shutdown of such equipment for necesary scheduled maintenance, shall not be deemed in violation of this article, provided the following requirements are met

a. Such occurrence in the case of unavoidable upset in or breakdown of equipment shall have been reported to the director as soon as reasonbly possible but no later than the next business day after the occurrence.

b. In the case of shutdown for necessary scheduled maintenance, the intent to shut down shall be reported to the director at least twenty-four hours prior to the shutdown and the exception provided by this section shall only apply in those cases where the maximum reasonable effort has been made to accomplish such maintenance during periods of nonoperation of any related source operation and that it would be unreasonable or impossible to shut down the source operation during the maintenance period.

c. The person responsible for such emission shall submit a full written report of such occurrence, including a statement as to the amount of and chemical composition of the emissions, causes of and the scheduling and nature of the actions to be taken to minimize or eliminate future occurrences including but not limited to action to correct the condition causing such emission to exceed said limits, to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded and to reduce the length of time said limits are exceeded.

(16.0) Sec. 18.98. Judicial review of orders of the board.

Orders of the board shall, without the necessity for a motion for rehearing, be subject to judicial review pursuant to the provisions of Chapter 536, RSMo.

(8.0) Sec. 18.99. Emergency condition.

1. Control.

Notwithstanding other provisions of this article, if the director after investigation finds, or has cause to believe that a generalized or specific condition of air pollution exists in any area of the city and that, in his opinion, such condition creates an emergency requiring immediate action to protect human health or safety in such areas the director may, with the written approval of the mayor or mayor pro-tem, issue such order or orders to persons causing or contributing to such condition of air pollution to reduce or discontinue immediately the emission of such air contaminants into the ambient air. Upon receipt of any such order, the persons to whom it is directed shall immediately comply with such orders.

2. Board action.

Upon issuance of any such emergency order by the director, he shall refer the matter to the board immediately, which shall fix a time and place for hearing to be held before the board not later than forty-eight (48) hours after the issuance of the emergency order or such longer time as the persons to whom the order is directed may designate, to investigate and determine the factors causing or contributing to such emergency condition.

All persons whose interests are prejudiced or affected in any manner by such order shall have the right to appear in person or by counsel at the hearing and to present evidence relative to the facts giving rise to such emergency order. Within twenty-four (24) hours after completion of the hearing, the board shall affirm, modify or set aside the director's emergency order or orders as the board deems appropriate. Thereupon the board shall notify all parties appearing in person or by counsel of its determination in writing, by certified mail.

(8.0) Sec. 18.100. Rules for controlling emissions during periods of high air pollution potential.

A. General Provisions.

1. This regulation shall apply to all emissions from any source or any premises.

2. It may apply to all or part of the city depending upon which pollutant fulfills the requirements of subsection (B)(2), below, and whether or not air sampling reveals only a localized problem.

B. Air pollution alerts and emergencies.

1. Alert and emergency level values are stated as:

a. As used in this section, "product" means the hourly sulfur dioxide concentration in parts per million multiplied by the hourly particulate concentration expressed as the Coefficient of Haze (COH) per 1,000 linear feet, or

b. The concentrations of SO_2, CO, Photochemical oxidants, particulates in COHs, or NO_2.

The basis of reference for the city data shall be: Sulfur dioxide as measured by the continuous modified West-Gaeke method or any other method standardized against such; particulates as measured by the automatic paper-tape sampler method, "ASTM Standard Method of Test for Particulate Matter in the Atmosphere, Optical Density of Filtered Deposit, D-1704-61", Carbon Monoxide as measured by the infrared spectophotometer method, MSA Bulletin No. 0705-10, Instrument Division, Pittsburgh, Pennsylvania, photochemical oxidants as measured by "Analytical Methods of the "Inter-society Committee on Methods for Ambient Air Sampling and Analyses" Health Laboratory Science, 1970."

2. Alert value.

   a. Yellow Alert value. Any one of the following shall initiate the yellow alert:

      1. Product reaching 0.2 at any sampling station (24 hour average).

      2. Sulfur dioxide concentration reaching 0.30 ppm at any sampling station (24 hour average).

      3. Photochemical oxidant concentration reaching 0.10 ppm at any sampling station (8 hour average).

      4. Carbon monoxide concentration reaching 15 ppm at any sampling station (8 hour average.).

      5. Particulate concentration reaching 3 COHs (375 ug/m^3) at any sampling station (24 hour average).

      6. NO_2 concentration reaching 0.6 ppm at any sampling station (1 hour average) 0.15 ppm (24 hour average).

   b. Red Alert value. Any one of the following shall initiate the red alert:

      1. Product reaching 0.8 at any sampling station (24 hour average).

      2. Sulfur dioxide concentration reaching 0.6 ppm at any sampling station (24 hour average).

      3. Photochemical oxidant concentration reaching 0.4 ppm at any sampling station (24 hour average).

      4. Carbon monoxide concentration reaching 30 ppm at any sampling station (8 hour average).

      5. Particulate concentration reaching 5 COHs (625 ug/m^3) at any sampling station (24 hour average).

      6. NO_2 concentration reaching 1.2 ppm at any sampling station (1 hour average) 0.3 ppm (24 hour average).

c. Emergency Alert value. Any one of the following shall initiate an emergency alert:

   1. Product reaching 1.2 at any sampling station (24 hour average).

   2. Sulfur dioxide concentration reaching 0.8 ppm at any sampling station (24 hour average).

   3. Photochemical oxidant concentration reaching 0.6 ppm at any sampling station (hour average).

   4. Carbon monoxide concentration reaching 40 ppm at any sampling station (8 hour average).

   5. Particulate concentration reaching 7 COHs (875 ug/m^3) at any sampling station (24 hour average).

   6. NO_2 concentration reaching .6 ppm at any sampling station (1 hour average) 0.4 ppm (24 hour average).

C. Air Pollution Watch.

1. Air pollution watch procedures shall be initiated by the director upon receipt of a 36-hour high air stagnation advisory from the National Severe Storms Administration, or the National Air Pollution Control Administration for an area including all or part of the affected area.

   The following watch procedure shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that watch conditions exist.

   b. Notify all affected governmental control agencies that watch conditions exist, and that coordination of action is required.

   c. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 2 hours, with continual hourly review, at a central control location, if such equipment is available and it is deemed necessary by the director.

   d. Inform the general public through the news media that a high air pollution potential exists, the area or areas where high initial readings have been obtained from sampling, and encourage persons suffering from respiratory ailments or heart conditions to take whatever precautions are most appropriate.

e. Backyard incineration, including the open burning of leaves, tree trimmings, garbage, and other refuse shall be prohibited throughout the entire affected area.

f. All variances or permits allowing open burning shall be temporarily rendered invalid for the duration of the high air pollution potential.

g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the director shall be notified that watch conditions exist. All such industries shall be requested to voluntarily begin actions to reduce emissions of air contaminants from their operations, consistent with the provisions of their yellow alert plans. See Table I.

h. The director may request through the news media that the use of automobiles be restricted to necessary driving only.

D. Yellow Alert.

1. Yellow alert procedures shall be initiated by the director if an air stagnation advisory and/or the yellow alert values are equalled or exceeded at any one sampling station within the advisory area, unless there is a current forecast of meteorological improvement within the next 24 hours.

2. The following yellow alert procedures shall apply:

a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that yellow alert conditions exist.

b. Notify all affected governmental control agencies that yellow alert conditions exist, and that coordination of action is required.

c. Notify all hospitals within the affected area that yellow alert conditions exist.

d. Increase the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour, with continual hourly review at a central control location, if such equipment is available and it is deemed necessary by the director.

e. Inform the general public through the news media that a yellow alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

f. The director shall request very emphatically through the news media that all unnecessary use of automobiles be restricted, and that all entertainment functions and facilities be closed.

g. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the director for yellow alert conditions shall initiate such plans upon notification by the director. See Table I.

h. No open burning will be allowed anywhere within the affected area.

E. Red Alert.

1. Red alert procedures shall be initiated by the director if the following requirements are met:

    a. A 36 or 24-hour high air stagnation advisory is in effect for all parts of the affected area.

    b. The red alert values equalled or exceeded at any one monitoring station within the area.

    The red alert can also be initiated if:

    a. The red alert value is equalled or exceeded as the arithmetic mean for 12 consecutive hours, and an air stagnation advisory.

    b. The yellow alert value is equalled or exceeded as the arithmetic mean for 24 consecutive hours and a forecast of stagnation for the following 12 hours is received.

2. The following red alert procedures shall apply:

    a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that red alert conditions exist.

    b. Notify all affected governmental control agencies that red alert conditions exist.

    c. Notify all hospitals within the affected area that red alert conditions exist.

    d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1 hour with continual hourly review at a central control location.

e. Inform the general public through the news media that a red alert exists, the geographical area or areas where the alert is applicable, the emission and type of source or sources that initiated the alert, individual abatement actions which will help alleviate the problem, and encourage those with respiratory ailments or heart conditions to take the most appropriate and expedient precautions.

f. Airlines operating within the red alert area shall be notified that such conditions exist, and that a reduction of flights out of the airport may be required.

g. Non-local vehicular traffic may be diverted around the red alert area depending upon which pollutant or pollutants caused the alert.

h. Local vehicular traffic shall through the news media be told to avoid certain areas, and emphatically told to restrict nonessential trips.

i. All incineration and open burning shall cease, regardless of location.

j. Facilities which are sources of air contaminant emissions and are required to file approved alert plans with the director for red alert conditions shall initiate such plans upon notification by the director. See Table II.

F. Air Pollution Emergency.

1. Emergency procedures shall be initiated by the director if the following requirements are met:

   a. A 36 or 24-hour high air stagnation advisory is in effect for all parts of the affected area.

   b. The air pollution emergency values are equalled or exceeded at any one monitoring station.

   The air pollution emergency procedures can also be initiated if:

   a. The air pollution emergency value is equalled or exceeded as the arithmetic mean of 12 consecutive hours and a forecast of stagnation for the following 12 hours is received, or

   b. The red alert is equalled or exceeded as the arithmetic mean for 24 hours and a forecast of stagnation for the following 12 hours is received, or

c. The yellow alert value is equalled or exceeded as the arithmetic mean for 36 hours and a forecast of stagnation for the following 12 hours is received.

2. The following emergency procedures shall apply:

   a. Notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that an emergency exists.

   b. Notify all affected governmental control agencies that an emergency exists, and that coordination of action is required.

   c. Notify all hospitals within the affected area that an emergency exists, and to be so prepared.

   d. Increase, if necessary, the frequency of air monitoring at all sampling stations which are not continuous at intervals not exceeding 1/2 hour with continual half-hour review at a central control location.

   e. Open burning and incineration shall cease throughout the area.

   f. Facilities which are sources of air contaminant emissions and are required to have filed approved plans upon notification by the director or his representative that air pollution emergency conditions exist. See Table III.

   g. The use of motor vehicles is prohibited except in emergencies with the approval of local or state police.

   h. All manufacturing facilities except those listed in (F)(2)(f) shall institute such action as will result in maximum reduction of air contaminants from their operations by ceasing, curtailing, or postponing operations to the extent possible without causing injury to persons or damage to equipment.

   i. All airplane flights originating within the area of the air pollution emergency shall be cancelled.

   j. All places of employment described below shall immediately cease operation during the air pollution emergency:

      Mining and Quarrying
      Contract Construction Work
      Wholesale Trade Establishments
      Schools and Libraries

Governmental agencies except those needed to administer air pollution alert programs and other essential agencies determined by the director to be vital for public safety and welfare and needed to administer the provisions of these regulations.

Retail trade stores except those dealing primarily in sale of food or pharmacies.

Banks, real estate agencies, insurance offices and similar businesses.

Laundries, cleaners and dryers, beauty and barber shops and photographic studios.

Amusement and recreational service establishments such as motion picture theaters.

Automobile repair and automobile service garages.

Advertising offices, consumer credit reporting, adjustment and collection agencies, printing and duplicating services, rental agencies and commercial testing laboratories.

G. It should be made clear that an air pollution watch, yellow alert, red alert or emergency can be declared on the basis of deteriorating air quality alone; an air stagnation advisory need not be in effect. The appropriate episode status should be declared by the director when any monitoring site records ambient air quality below that dedignated in the criteria.

The levels used to designate an air pollution emergency are those that pose an eminent and substantial endangerment to public health. Because these levels should not be permitted to occur, an air stagnation advisory should be declared when it appears that these levels may be reached.

H. Termination of Alerts.

When in the judgment of the director meteorological conditions and pollutant concentrations are such to warrant discontinuance of any alert condition, he shall notify the technical staff, the chairman, and members of the Missouri Air Conservation Commission that the alert has been discontinued, and issue a public notice to that effect.

TABLE I

YELLOW ALERT PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan
1. Electric Power Generating Facilities	1a. Reduction of emission by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 PM.M to 4:00 P.M.)
	c. Reduction of emissions by diverting electric power generation to facilities outside of area for which the alert is called.
2. Process Steam Generating Facilities	2a. Reduction of emissions by utilization of fuels having low ash and sulfur content.
	b. Soot blowing and boiler lancing to be allowed only during periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.)
	c. Reduction of steam load demands consistent with continuing the operation of the plant.
3. Manufacturing industries of the following (SIC) group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29	3a. Reduction of air contaminant emissions by curtailing, postponing, or deferring production and allied operations.
	b. Stop all trade waste disposal production which emit particles, gases, vapors or malodorous substances including incineration.
	c. Reduction of heat load demands for processing to a minimum.

Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries -Group 20	
4. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	4a. Reduction of air contaminant emissions by curtailing or deferring production and allied operations.
	b. Stop all trade waste disposal practices which emit particles, gases, vapors or malodorous substances including incineration.
	c. Reduction of heat load demands for processing to a minimum.
5. Private, public and commercial refuse disposal operations.	5a. Stop all open burning including disposal of diseased trees and burning at fire fighting schools, except as required for disposal of hazardous materials or other emergency needs.
	b. Operation of incinerators shall be limited to the hours between 10:00 A.M. and 2:00 P.M.
6. Transportation	6a. The unnecessary operation of any motor vehicle should be restricted.

TABLE II

RED ALERT PLAN OBJECTIVES

All Yellow ert plans shall be continued. In addition, the following steps shall be taken:

Air Contaminant Source	Requirements for Plan
1. Process steam generating facilities	1a. Maximum reduction of air contaminant emissions by utilization of fuels having

	the lowest ash and sulfur content.
	b. Maximum utilization of periods of high atmospheric turbulence (12:00 P.M. to 4:00 P.M.) for soot blowing and boiler lancing.
	c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
2. Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemical and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, Clay and Concrete Product Industries-Group 32 Primary Metals Industries -Group 33 Grain Industries-Group 20	2a. Maximum reduction of air contaminant emission by, if necessary, postponing production and allied operations b. Maximum reduction of heat load demands for processing. c. Prepare to implement the "emergency" plan submitted to the Executive Secretary.
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a. Maximum reduction of air contaminant emissions by, if necessary, postponing production and allied operations.
4. Private, public and commercial refuse disposal operations.	4a. Stop operation of all incinerators.
5. Transportation	5a. Car pools and public transportation must be used in place of unnecessary motor vehicle operation.

TABLE III

AIR POLLUTION EMERGENCY PLAN OBJECTIVES

Air Contaminant Source	Requirements for Plan

All Yellow and Red Alert plans shall be continued. In addition, the following steps shall be taken:

1. Process steam generating facilities	1a. Maximum reduction of air contaminant emissions by reducing heat and steam load demands to values consistent with preventing equipment damage.
2. Manufacturing industries of the following SIC Group designations Paper and Allied Products Industries-Group 26 Chemicals and Allied Products Industries-Group 28 Petroleum Refining and Related Industries-Group 29 Stone, Glass, and Clay and Concrete Product Industries-Group 32 Primary Metal Industries-Group 33 Grain Industries-Group 23	2a. Elimination of air contaminant emission from the manufacturing operations by ceasing, curtailing, postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment.
3. Other manufacturing facilities required to submit alert plans by the Executive Secretary.	3a. Elimination of air contaminant emissions from the manufacturing operations by ceasing, curtailing postponing or deferring production and allied operations to the extent possible without causing injury to persons or damage to equipment. b. Maximum reduction of heat load demands for processing.
4. Private, public and commercial operations.	4a. The following places of employment, if notified by the Executive Secretary, shall immediately cease operations:

	1. Mining and quarrying operations. 2. Construction projects except as required to avoid emergency physical harm. 3. Manufacturing establishments except those required to have in force an air pollution alert plan. 4. Wholesale trade establishments. 5. Governmental units, except as required to implement the provisions of these regulations and other operations essential to immediate protection of the public welfare and safety. 6. Retail trade and service establishments except pharmacies, food stores and other similar operations providing for emergency needs. 7. Other commercial service operations such as those engaged in banking, insurance real estate, advertising, etc. 8. Educational institutions. 9. Amusement and recreational facilities.
5. Transportation	5a. Motor vehicles shall only be used for private and public emergency needs.

(16.0) Sec. 18.101 Air Pollution Control Advisory Board.

A. Appointed.

1. Advisory Board. There is hereby created an Air Pollution Control Advisory Board, which shall consist of seven (7) members, to be appointed by the Mayor, with the approval of the city council. The purpose of the advisory board will be to provide advice, quidance and assistance to the air pollution control program of the city. The members shall be selected from nominees submitted from civic organizations, both women's and men's, and shall include three (3) persons representing industry and four (4) persons representing the public interest from various areas of the city. All members shall be appointed for a term of four (4) years, except that for the initially appointed advisory board, one (1) member shall serve for one (1) year, two members for two (2) years, two members for three (3) years, and two (2) members for four (4) years. Each member shall be a person who has been a resident of Kansas City, Missouri continuously for at least three (3) years prior to his appointment. No member of the advisory board shall be an officer or an employee of any governmental agency. Vacancies on the advisory board shall be filled for the unexpired term by the mayor, with the approval of the city council. Members appointed to fill vacancies shall have qualifications which their predecessors were required to possess.

2. Chairman. The mayor shall designate one of the members of the advisory board to serve as chairman.

3. Secretary. The chief of the air pollution control division shall serve as secretary to the advisory board and shall maintain appropriate records of the advisory board proceedings. The secretary shall have no vote on the advisory board.

B. Actions by Advisory Board.

1. General provisions.

   a. The advisory board shall hold at least four (4) regular meetings each year and such additional meetings as the chairman deems desirable. The place and time of meetings shall be established by the chairman.

   b. Meetings of the board shall be conducted as a public forum where major policy decisions, ordinance revisions, budget requirements, and program developments can be discussed publicly.

c. The advisory board may:

(1) Review proposals for or on its own initiative recommend a comprehensive plan or suggest revisions of existing plans for the prevention, abatement and control of air pollution.

(2) Review suggestions or on its own initiative make recommendations for the development of a public information program.

(3) Encourage the establishment of a uniform air pollution control program for the metropolitan area.

(4) Undertake other advisory functions as the advisory board may consider appropriate or the program director may request.

(50.7) Sec. 18.102 Public Nuisance.

1. Unlawful. The emission into the ambient air of air contaminants resulting in air pollution, in violation of any section under this article, is declared to be and shall constitute a public nuisance, and it shall be unlawful for any person to cause, permit or maintain any such public nuisance.

2. Outside corporate limits. Pursuant to the provisions of section 71.780, RSMo, the emission into the ambient air of air contaminants resulting in air pollution, in violation of any section under this article within the boundaries of the city and within unincorporated areas within one-half (1/2) mile outside of the city, is hereby declared to be a public nuisance which is injurious to the health and welfare of the inhabitants of the city.

(15.0) Sec. 18.102.1 Penalties.

1. Fine. Every person convicted of a violation of this article shall be punished by a fine of not less than ten dollars ($10.00), nor more than five thousand dollars ($5,000.00) or by imprisonment for not more than ninety (90) days, or by both such fine and imprisonment. Each day that a violation shall continue, after notice from the director, shall constitute a separate offense.

2. Confidential information. Each willful disclosure of confidential information or conspiracy to disclose such information to any person other than the one entitled to such information in pursuance of his duties under this article shall be deemed to be a misdemeanor, and shall be subject to such civil remedies and criminal penalties for such wrongful action as may be against him.

(2.0) Sec. 18.102.2 Actionable Rights.

Persons other than the city shall not acquire actionable rights by virtue of this article, including the sections hereunder. A determination by the director or the board that air pollution or air contamination exists, or that this article or any section hereunder is being violated, whether or not a proceeding or action is brought by the director, board or city, shall not create by reason thereof, any presumption of law or finding of fact which shall inure to or be for the benefit of any person other than the city.

FEDERALLY PROMULGATED REGULATIONS

(14.0) § 52.1324 · General Requirements.

(b) Regulation for public availability of emission data.

(1) Any person who cannot obtain emission data from the Agency responsible for making emission data available to the public, as specified in the applicable plan, concerning emissions from any source subject to emission limitations which are part of the approved plan may request that the appropriate Regional Administrator obtain and make public such data. Within 30 days after receipt of any such written request, the Regional Administrator shall require the owner or operator of any such source to submit information within 30 days on the nature and amounts of emissions from such source and any other information as may be deemed necessary by the Regional Administrator to determine whether such source is in compliance with applicable emission limitations or other control measures that are part of the applicable plan.

(2) Commencing after the initial notification by the Regional Administrator pursuant to paragraph (b)(1) of this section, the owner or operator of the source shall maintain records of the nature and amounts of emissions from such source and any other information as may be deemed necessary by the Regional Administrator, to determine whether such source is in compliance with applicable emission limitations or other control measures that are part of the plan. The information recorded shall be summarized and reported to the Regional Administrator, on forms furnished by the Regional Administrator, and shall be submitted within 45 days after the end of the reporting period. Reporting periods are January 1-June 30 and July 1-December 31.

(3) Information recorded by the owner or operator and copies of this summarizing report submitted to the Regional Administrator shall be retained by the owner or operator for 2 years after the date on which the pertinent report is submitted.

(4) Emission data obtained from owners or operators of stationary sources will be correlated with applicable emission limitations and other control measures that are part of the applicable plan and will be available at the appropriate regional office and at other locations in the state designated by the Regional Administrator.

(10.0) 52.1324 Review of New or Modified Indirect Sources

(b) Regulation for Review of New or Modified Indirect Sources

(1) All terms used in this paragraph but not specifically defined below shall have the meaning given them in 52.01 of this chapter.

(i) The term "indirect source" means a facility, building, structure, or installation which attracts or may attract mobile source activity that results in emissions of a pollutant for which there is a national standard. Such indirect sources include, but are not limited to:

(a) Highways and roads.

(b) Parking facilities.

(c) Retail, commercial and industrial facilities.

(d) Recreation, amusement, sports and entertainment facilities.

(e) Airports.

(f) Office and Government buildings.

(g) Apartment and condominium buildings.

(h) Education facilities.

(ii) The term "Administrator" means the Administrator of the Environmental Protection Agency or his designated agent.

(iii) The term "associated parking area" means a parking facility or facilities owned and/or operated in conjunction with an indirect source.

(iv) The term "aircraft operation" means an aircraft take-off or landing.

(v) The phrase "to commence construction" means to engage in a continuous program of on-site construction including site clearance, grading, dredging, or land filling specifically designed for an indirect source in preparation for the fabrication, erection, or installation of the building components of the indirect source. For the purpose of this paragraph, interruptions resulting from acts of God, strikes, litigation, or other matters beyond the control of the owner shall be disregarded in determining whether a construction or modification program is continuous.

(vi) The phrase "to commence modification" means to engage in a continuous program of on-site modification, including site clearance, grading, dredging, or land filling in preparation for specific modification of the indirect source.

(vii) The term "highway section" means the development proposal of a highway of substantial length between logical termini (major crossroads, population centers, major traffic generators, or similar major highway control elements) as normally included in a single location study or multi-year highway improvement program as set forth in 23 CFR 770.201 (38 FR 31677).

(viii) The term "highway project" means all or a portion of a highway section which would result in a specific construction contract.

(ix) The term "Standard Metropolitan Statistical Area (SMSA)" means such areas as designated by the U.S. Bureau of the Budget in the following publication: "Standard Metropolitan Statistical Area," issued in 1967, with subsequent amendments.

(2) The requirements of this paragraph are applicable to the following:

(i) In an SMSA:

(a) Any new parking facility or other new indirect source with an associated parking area, which has a new parking capacity of 1,000 cars or more; or

(b) Any modified parking facility, or any modification of an associated parking area, which increases parking capacity by 500 cars or more; or

(c) Any new highway project with an anticipated average annual daily traffic volume of 20,000 or more vehicles per day within ten years of construction; or

(d) Any modified highway project which will increase average annual daily traffic volume by 10,000 or more vehicles per day within ten years after modification.

(ii) Outside an SMSA:

(a) Any new parking facility, or other new indirect source with an associated parking area, which has a parking capacity of 2,000 cars or more; or

(b) Any modified parking facility, or any modification of an associated parking area, which increases parking capacity by 1,000 cars or more.

(iii) Any airport, the construction or general modification program of which is expected to result in the following activity within ten years of construction or modification:

(a) New airport: 50,000 or more operations per year by regularly scheduled air carriers, or use by 1,600,000 or more passengers per year.

(b) Modified airport: Increase of 50,000 or more operations per year by regularly scheduled air carriers over the existing volume of operations, or increase of 1,600,000 or more passengers per year.

(iv) Where an indirect source is constructed or modified in increments which individually are not subject to review under this paragraph, and which are not part of a program of construction or modification in planned incremental phases approved by the Administrator, all such increments commenced after December 31, 1974, or after the latest approval hereunder, whichever date is most recent, shall be added together for determining the applicability of this paragraph.

(3) No owner or operator of an indirect source subject to this paragraph shall commence construction or modification of such source after December 31, 1974, without first obtaining approval from the Administrator. Application for approval to construct or modify shall be by means prescribed by the Administrator, and shall include a copy of any draft or final environmental impact statement which has been prepared pursuant to the National Environmental Policy Act (42 U.S.C. 4321). If not included in such environmental impact statement, the Administrator may request the following information:

(i) For all indirect sources subject to this paragraph, other than highway projects:

(a) The name and address of the applicant.

(b) A map showing the location of the site of indirect source and the topography of the area.

(c) A description of the proposed use of the site, including the normal hours of operation of the facility, and the general types of activities to be operated therein.

(d) A site plan showing the location of associated parking areas, points of motor vehicle ingress and egress to and from the site and its associated parking areas, and the location and height of buildings on the site.

(e) An identification of the principal roads, highways, and intersections that will be used by motor vehicles moving to or from the indirect source.

(f) An estimate, as of the first year after the date the indirect source will be substantially complete and operational, of the average daily traffic volumes, maximum traffic volumes for one-hour and eight-hour periods, and vehicle capacities of the principal roads, highways, and intersections identified pursuant to subdivision (i) (e) of this subparagraph located within one-fourth mile of all boundaries of the site.

(g) Availability of existing and projected mass transit to service the site.

(h) Where approval is sought for indirect sources to be constructed in incremental phases, the information required by this subparagraph (3) shall be submitted for each phase of the construction project.

(i) Any additional information or documentation that the Administrator deems necessary to determine the air quality impact of the indirect source, including the submission of measured air quality data at the proposed site prior to construction or modification.

(ii) For airports:

(a) An estimate of the average number and maximum number of aircraft operations per day by type of aircraft during the first, fifth and tenth years after the date of expected completion.

(b) A description of the commercial, industrial, residential and other development that the applicant expects will occur within three miles of the perimeter of the airport within the first five and the first ten years after the date of expected completion.

(c) Expected passenger loadings at the airport.

(d) The information required under subdivisions (i) (a) through (i) of this subparagraph.

(iii) For highway projects:

(a) A description of the average and maximum traffic volumes for one, eight, and 24-hour time periods expected within 10 years of date of expected completion.

(b) An estimate of vehicle speeds for average and maximum traffic volume conditions and the vehicle capacity of the highway project.

(c) A map showing the location of the highway project, including the location of buildings along the right-of-way.

(d) A description of the general features of the highway project and associated right-of-way, including the approximate height of buildings adjacent to the highway.

(e) Any additional information or documentation that the Administrator deems necessary to determine the air quality impact of the indirect source, including the submission of measured air quality data at the proposed site prior to construction or modification.

(iv) For indirect sources other than airports and those highway projects subject to the provisions of paragraph (b) (6) (iii) of this section, the air quality monitoring requirements of paragraph (b) (3) (i) (i) of this section shall be limited to carbon monoxide, and shall be conducted for a period of not more than 14 days.

(4) (i) For indirect sources other than highway projects and airports, the Administrator shall not approve an application to construct or modify if he determines that the indirect source will:

(a) Cause a violation of the control strategy of any applicable state implementation plan; or

(b) Cause or exacerbate a violation of the national standards for carbon monoxide in any region or portion thereof.

(ii) The Administrator shall make the determination pursuant to paragraph (b) (4) (i) (b) of this section by evaluating the anticipated concentration of carbon monoxide at reasonable receptor or exposure sites which will be affected by the mobile source activity expected to be attracted by the indirect source. Such determination may be made by using traffic flow characteristic guidelines published by the Environmental Protection Agency which relate traffic demand and capacity considerations to ambient carbon monoxide impact, by use of appropriate atmospheric diffusion models (examples of which are referenced in Appendix O to Part 51 of this chapter), and/or by any other reliable analytic method. The applicant may (but need not) submit with his application, the results of an appropriate diffusion model and/or any other reliable analytic method, along with the technical data and information supporting such results. Any such results and supporting data submitted by the applicant shall be considered by the Administrator in making his determination pursuant to paragraph (b) (4) (i) (b) of this section.

(5) (i) For airports subject to this paragraph, the Administrator shall base his decision on the approval or disapproval of an application on the considerations to be published as an Appendix to this Part.

(ii) For highway projects and parking facilities specified under paragraph (b) (2) of this section which are associated with airports, the requirements and procedures specified in paragraphs (b) (4) and (6) (i) and (ii) of this section shall be met.

(6) (i) For all highway projects subject to this paragraph, the Administrator shall not approve an application to construct or modify if he determines that the indirect source will:

(a) Cause a violation of the control strategy of any applicable state implementation plan; or

(b) Cause or exacerbate a violation of the national standards for carbon monoxide in any region or portion thereof.

(ii) The determination pursuant to paragraph (b) (6) (i) (b) of this section shall be made by evaluating the anticipated concentration of carbon monoxide at reasonable receptor or exposure sites which will be affected by the mobile source activity expected on the highway for the ten year period following the expected date of completion according to the procedures specified in paragraph (b) (4) (ii) of this section.

(iii) For new highway projects subject to this paragraph with an anticipated average daily traffic volume of 50,000 or more vehicles within ten years of construction, or modifications to highway projects subject to this paragraph which will increase average daily traffic volume by 25,000 or more vehicles within ten years after modification, the Administrator's decision on the approval or disapproval of an application shall be based on the considerations to be published as an Appendix to this Part in addition to the requirements of paragraph (b) (6) (i) of this section.

(7) The determination of the air quality impact of a proposed indirect source "at reasonable receptor or exposure sites", shall mean such locations where people might reasonably be exposed for time periods consistent with the national ambient air quality standards for the pollutants specified for analysis pursuant to this paragraph.

(8) (i) Within 20 days after receipt of an application or addition thereto, the Administrator shall advise the owner or operator of any deficiency in the information submitted in support of the application. In the event of such a deficiency, the date of receipt of the application for the purpose of paragraph (b) (8) (ii) of this section shall be the date on which all required information is received by the Administrator.

(ii) Within 30 days after receipt of a complete application, the Administrator shall:

(a) Make a preliminary determination whether the indirect source should be approved, approved with conditions in accordance with paragraphs (b) (9) or (10) of this section, or disapproved.

(b) Make available in at least one location in each region in which the proposed indirect source would be constructed, a copy of all materials submitted by the owner or operator, a copy of the Administrator's preliminary determination, and a copy or summary of other materials, if any, considered by the Administrator in making his preliminary determination; and

(c) Notify the public, by prominent advertisement in a newspaper of general circulation in each region in which the proposed indirect source would be constructed, of the opportunity for written public comment on the information submitted by the owner or operator and the Administrator's preliminary determination on the approvability of the indirect source.

(iii) A copy of the notice required pursuant to this subparagraph shall be sent to the applicant and to officials and agencies having cognizance over the location where the indirect source will be situated, as follows: State and local air pollution control agencies, the chief executive of the city and county; any comprehensive regional land use planning agency; and for highways, any local board or committee charged with responsibility for activities in the conduct of the urban transportation planning process (3-C process) pursuant to 23 U.S.C. 134.

(iv) Public comments submitted in writing within 30 days after the date such information is made available shall be considered by the Administrator in making his final decision on the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Administrator shall consider the applicant's response in making his final decision. All comments shall be made available for public inspection in at least one location in the region in which the indirect source would be located.

(v) The Administrator shall take final action on an application within 30 days after the close of the public comment period. The Administrator shall notify the applicant in writing of his approval, conditional approval, or denial of the application, and shall set forth his reasons for conditional approval or denial. Such notification shall be made available for public inspection in at least one location in the region in which the indirect source would be located.

(vi) The Administrator may extend each of the time periods specified in paragraphs (b) (8) (ii), (iv), or (v) of this section by no more than 30 days, or such other period as agreed to by the applicant and the Administrator.

(9) (i) Whenever an indirect source as proposed by an owner or operator's application would not be permitted to be constructed for failure to meet the tests set forth pursuant to paragraphs (b) (4) (i), (b) (5) (i), or (b) (6) (i) and (iii) of this section, the Administrator may impose reasonable conditions on an approval related to the air quality aspects of the proposed indirect source so that such source, if constructed or modified in accordance with such conditions, could meet the tests set forth pursuant to paragraphs (b) (4) (i), (b) (5) (i), or (b) (6) (i) and (iii) of this section. Such conditions may include, but not be limited to:

(a) Binding commitments to roadway improvements or additional mass transit facilities to serve the indirect source secured by the owner or operator from governmental agencies having jurisdiction thereof;

(b) Binding commitments by the owner or operator to specific programs for mass transit incentives for employees and patrons of the source; and

(c) Binding commitments by the owner or operator to construct, modify, or operate the indirect source in such a manner as may be necessary to achieve the traffic flow characteristics published by the Environmental Protection Agency pursuant to paragraph (b) (4) (ii) of this section.

(ii) The Administrator may specify that any items of information provided in an application for approval related to the operation of an indirect source which may affect the source's air quality impact shall be considered permit conditions.

(10) Notwithstanding the provisions relating to modified indirect sources contained in paragraph (b) (2) of this section, the Administrator may condition any approval by reducing the extent to which the indirect source may be further modified without resubmission for approval under this paragraph.

(11) Any owner or operator who fails to construct an indirect source in accordance with the application as approved by the Administrator; any owner or operator who fails to construct and operate an indirect source in accordance with conditions imposed by the Administrator under paragraph (b) (9) of this section; any owner or operator who modifies an indirect source in violation of conditions imposed by the Administrator under paragraph (b) (10) of this section; or any owner or operator of an indirect source subject to this paragraph who commences construction or modification thereof after December 31, 1974, without applying for and receiving approval hereunder, shall be subject to the penalties specified under section 113 of the Act and shall be considered in violation of an emission standard or limitation under section 304 of the Act. Subsequent modification to an approved indirect source may be made without applying for permission pursuant to this paragraph only where such modification would not violate any condition imposed pursuant to paragraphs (b) (9) and (10) of this section and would not be subject to the modification criteria set forth in paragraph (b) (2) of this section.

(12) Approval to construct or modify shall become invalid if construction or modification is not commenced within 24 months after receipt of such approval. The Administrator may extend such time period upon satisfactory showing that an extension is justified. The applicant may apply for such an extension at the time of initial application or at any time thereafter.

(13) Approval to construct or modify shall not relieve any owner or operator of the responsibility to comply with the control strategy and all local, State and Federal regulations which are part of the applicable State implementation plan.

(14) Where the Administrator delegates the responsibility for implementing the procedures for conducting indirect source review pursuant to this paragraph to any agency, other than a regional office of the Environmental Protection Agency, the following provisions shall apply:

(i) Where the agency designated is not an air pollution control agency, such agency shall consult the appropriate State or local air pollution control agency prior to making any determination required by paragraphs (b) (4), (5), or (6) of this section. Similarly, where the agency designated does not have continuing responsibilities for land use planning, such agency shall consult with the appropriate State or local land use and transportation planning agency prior to making any determination required by paragraph (b) (9) of this section.

(ii) The Administrator of the Environmental Protection Agency shall conduct the indirect source review pursuant to this paragraph for any indirect source owned or operated by the United States Government.

(iii) A copy of the notice required pursuant to paragraph (b) (8) (ii) (c) of this section shall be sent to the Administrator through the appropriate Regional Office.

(15) In any area in which a "management of parking supply" regulation which has been promulgated by the Administrator is in effect, indirect sources which are subject to review under the terms of such a regulation shall not be required to seek review under this paragraph but instead shall be required to seek review pursuant to such management of parking supply regulation. For purposes of this paragraph, a "management of parking supply" regulation shall be any regulation promulgated by the Administrator as part of a transportation control plan pursuant to the Clean Air Act which requires that any new or modified facility containing a given number of parking spaces shall receive a permit or other prior approval, issuance of which is to be conditioned on air quality considerations.

(16) Notwithstanding any of the foregoing provisions to the contrary, the operation of this paragraph is hereby suspended pending further notice. No facility which commences construction prior to the expiration of the sixth month after the operation of this paragraph is reinstated (as to that type of facility) shall be subject to this paragraph.

(37 FR 10846, May 31, 1972 as amended at 40 FR 28065, July 3, 1975; 40 FR 40160, Sept. 2, 1975)

(17.0) 52.1339 Prevention of Significant Deterioration

(b) Definitions. For the purposes of this section:

(1) "Facility" means an identifiable piece of process equipment. A stationary source is composed of one or more pollutant-emitting facilities.

(2) The phrase "Administrator" means the Administrator of the Environmental Protection Agency or his designated representative.

(3) The phrase "Federal Land Manager" means the head, or his designated representative, of any Department or Agency of the Federal Government which administers federally-owned land, including public domain lands.

(4) The phrase "Indian Reservation" means any federally-recognized reservation established by Treaty, Agreement, Executive Order, or Act of Congress.

(5) The phrase "Indian Governing Body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(6) "Construction" means fabrication, erection or installation of a stationary source.

(7) "Commenced" means that an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification.

(c) Area designation and deterioration increment

(1) The provisions of this paragraph have been incorporated by reference into the applicable implementation plans for various States, as provided in Subparts B through DDD of this part. Where this paragraph is so incorporated, the provisions shall also be applicable to all lands owned by the Federal Government and Indian Reservations located in such State. The provisions of this paragraph do not apply in those counties or other functionally equivalent areas that pervasively exceeded any national ambient air quality standards during 1974 for sulfur dioxide or particulate matter and then only with respect to such pollutants. States may notify the Administrator at any time of those areas which exceeded the national standards during 1974 and therefore are exempt from the requirements of this paragraph.

(2) (i) For purposes of this paragraph, areas designated as Class I or II shall be limited to the following increases in pollutant concentration occurring since January 1, 1975:

Area Designations

Pollutant	Class I (ug/m^3)	Class II (ug/m^3)
Particulate matter:		
Annual geometric mean	5	10
24-hr maximum	10	30
Sulfur dioxide:		
Annual arithmetic mean	2	15
24-hr maximum	5	100
3-hr maximum	25	700

(ii) For purposes of this paragraph, areas designated as Class III shall be limited to concentrations of particulate matter and sulfur dioxide no greater than the national ambient air quality standards.

(iii) The air quality impact of sources granted approval to construct or modify prior to January 1, 1975 (pursuant to the approved new source review procedures in the plan) but not yet operating prior to January 1, 1975, shall not be counted against the air quality increments specified in paragraph (c) (2) (i) of this section.

(3) (i) All areas are designated Class II as of the effective date of this paragraph. Redesignation may be proposed by the respective States, Federal Land Manager, or Indian Governing Bodies, as provided below, subject to approval by the Administrator.

(ii) The State may submit to the Administrator a proposal to redesignate areas of the State Class I, Class II, or Class III, provided that:

(a) At least one public hearing is held in or near the area affected and this public hearing is held in accordance with procedures established in 51.4 of this chapter, and

(b) Other States, Indian Governing Bodies, and Federal Land Managers whose lands may be affected by the proposed redesignation are notified at least 30 days prior to the public hearing, and

(c) A discussion of the reasons for the proposed redesignation is available for public inspection at least 30 days prior to the hearing and the notice announcing the hearing contains appropriate notification of the availability of such discussion, and

(d) The proposed redesignation is based on the record of the State's hearing, which must reflect the basis for the proposed redesignation, including consideration of (1) growth anticipated in the area, (2) the social, environmental, and economic effects of such redesignation upon the area being proposed for redesignation and upon other areas and States, and (3) any impacts of such proposed redesignation upon regional or national interests.

(e) The redesignation is proposed after consultation with the elected leadership of local and other substate general purpose governments in the area covered by the proposed redesignation.

(iii) Except as provided in paragraph (c) (3) (iv) of this section, a State in which lands owned by the Federal Government are located may submit to the Administrator a proposal to redesignate such lands Class I, Class II, or Class III in accordance with subdivision (ii) of this subparagraph provided that:

(a) The redesignation is consistent with adjacent State and privately owned land, and

(b) Such redesignation is proposed after consultation with the Federal Land Manager.

(iv) Notwithstanding subdivision (iii) of this subparagraph, the Federal Land Manager may submit to the Administrator a proposal to redesignate any Federal lands to a more restrictive designation than would otherwise be applicable provided that:

(a) The Federal Land Manager follows procedures equivalent to those required of States under paragraph (c) (3) (ii) and,

(b) Such redesignation is proposed after consultation with the State(s) in which the Federal Land is located or which border the Federal Land.

(v) Nothing in this section is intended to convey authority to the States over Indian Reservations where States have not assumed such authority under other laws nor is it intended to deny jurisdiction which States have assumed under other laws. Where a State has not assumed jurisdiction over an Indian Reservation the appropriate Indian Governing Body may submit to the Administrator a proposal to redesignate areas Class I, Class II, or Class III, provided that:

(a) The Indian Governing Body follows procedures equivalent to those required of States under paragraph (c) (3) (ii) and,

(b) Such redesignation is proposed after consultation with the State(s) in which the Indian Reservation is located or which border the Indian Reservation and, for those lands held in trust, with the approval of the Secretary of the Interior.

(vi) The Administrator shall approve, within 90 days, any redesignation proposed pursuant to this subparagraph as follows:

(a) Any redesignation proposed pursuant to subdivisions (ii) and (iii) of this subparagraph shall be approved unless the Administrator determines (1) that the requirements of subdivisions (ii) and (iii) of this subparagraph have not been complied with, (2) that the State has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph, or (3) that the State has not requested and received delegation of responsibility for carrying out the new source review requirements of paragraphs (d) and (e) of this section.

(b) Any redesignation proposed pursuant to subdivision (iv) of this subparagraph shall be approved unless he determines (1) that the requirements of subdivision (iv) of this subparagraph have not been complied with, or (2) that the Federal Land Manager has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph.

(c) Any redesignation submitted pursuant to subdivision (v) of this subparagraph shall be approved unless he determines (1) that the requirements of subdivision (v) of this subparagraph have not been complied with, or (2) that the Indian Governing Body has arbitrarily and capriciously disregarded relevant considerations set forth in subparagraph (3) (ii) (d) of this paragraph.

(d) Any redesignation proposed pursuant to this paragraph shall be approved only after the Administrator has solicited written comments from affected Federal agencies and Indian Governing Bodies and from the public on the proposal.

(e) Any proposed redesignation protested to the proposing State, Indian Governing Body, or Federal Land Manager and to the Administrator by another State or Indian Governing Body because of the effects upon such protesting State or Indian Reservation shall be approved by the Administrator only if he determines that in his judgment the redesignation appropriately balances considerations of growth anticipated in the area proposed to be redesignated; the social, environmental and economic effects of such redesignation upon the area being redesignated and upon other areas and States; and any impacts upon regional or national interests.

(f) The requirements of paragraph (c) (3) (vi) (a) (3) that a State request and receive delegation of the new source review requirements of this section as a condition to approval of a proposed redesignation, shall include as a minimum receiving the administrative and technical functions of the new source review. The Administrator will carry out any required enforcement action in cases where the State does not have adequate legal authority to initiate such actions. The Administrator may waive the requirements of paragraph (c) (3) (vi) (a) (3) if the State Attorney-General has determined that the State cannot accept delegation of the administrative/technical functions.

(vii) If the Administrator disapproves any proposed area designation under this subparagraph, the State, Federal Land Manager or Indian Governing Body, as appropriate, may resubmit the proposal after correcting the deficiencies noted by the Administrator or reconsidering any area designation determined by the Administrator to be arbitrary and capricious.

(d) Review of new sources

(1) The provisions of this paragraph have been incorporated by reference into the applicable implementation plans for various States, as provided in Subparts B through DDD of this part. Where this paragraph is so incorporated, the requirements of this paragraph apply to any new or modified stationary source of the type identified below which has not commenced construction or modification prior to June 1, 1975 except as specifically provided below. A

source which is modified, but does not increase the amount of sulfur oxides or particulate matter emitted, or is modified to utilize an alternative fuel, or higher sulfur content fuel, shall not be subject to this paragraph.

(i) Fossil-Fuel Steam Electric Plants of more than 1000 million B.T.U. per hour heat input.

(ii) Coal Cleaning Plants.

(iii) Kraft Pulp Mills.

(iv) Portland Cement Plants.

(v) Primary Zinc Smelters.

(vi) Iron and Steel Mills.

(vii) Primary Aluminum Ore Reduction Plants.

(viii) Primary Copper Smelters.

(ix) Municipal Incinerators capable of charging more than 250 tons of refuse per 24 hour day.

(x) Sulfuric Acid Plants.

(xi) Petroleum Refineries.

(xii) Lime Plants.

(xiii) Phosphate Rock Processing Plants.

(xiv) By-Product Coke Oven Batteries.

(xv) Sulfur Recovery Plants.

(xvi) Carbon Black Plants (furnace process).

(xvii) Primary Lead Smelters.

(xviii) Fuel Conversion Plants.

(xix) Ferroalloy production facilities commencing construction after October 5, 1975.

(2) No owner or operator shall commence construction or modification of a source subject to this paragraph unless the Administrator determines that, on the basis of information submitted pursuant to subparagraph (3) of this paragraph:

(i) The effect on air quality concentration of the source or modified source, in conjunction with the effects of growth and reduction in emissions after January 1, 1975, of other sources in the area affected by the proposed source, will not violate the air quality increments applicable in the area where the source will be located nor the air quality increments applicable in any other areas. The analysis of emissions growth and reduction after January 1, 1975, of other sources in the areas affected by the proposed source shall include all new and modified sources granted approval to construct pursuant to this paragraph; reduction in emissions from existing sources which contributed to air quality during all or part of 1974; and general commercial, residential, industrial, and other sources of emissions growth not exempted by paragraph (c) (2) (111) of this section which has occurred since January 1, 1975.

(ii) The new or modified source will meet an emission limit, to be specified by the Administrator as a condition to approval, which represents that level of emission reduction which would be achieved by the application of best available control technology, as defined in 52.01 (f), for particulate matter and sulfur dioxide. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular class of sources would make the imposition of an emission standard infeasible, he may instead prescribe a design or equipment standard requiring the application of best available control technology. Such standard shall to the degree possible set forth the emission reductions achievable by implementation of such design or equipment, and shall provide for compliance by means which achieve equivalent results.

(iii) With respect to modified sources, the requirements of subparagraph (2) (ii) of this paragraph shall be applicable only to the facility or facilities from which emissions are increased.

(3) In making the determinations required by paragraph (d) (2) of this section, the Administrator shall, as a minimum, require the owner or operator of the source subject to this paragraph to submit: site information, plans, description, specifications, and drawings showing the design of the source; information necessary to determine the impact that the construction or modification will have on sulfur dioxide and particulate matter air quality levels; and any other information necessary to determine that best available control technology will be applied. Upon request of the Administrator, the owner or operator of the source shall provide information on the nature and extent of general commercial, residential, industrial, and other growth which has occurred in the area affected by the source's emissions (such area to be specified by the

Administrator) since January 1, 1975.

(4) (i) Where a new or modified source is located on Federal Lands, such source shall be subject to the procedures set forth in paragraphs (d) and (e) of this section. Such procedures shall be in addition to applicable procedures conducted by the Federal Land Manager for administration and protection of the affected Federal Lands. Where feasible, the Administrator will coordinate his review and hearings with the Federal Land Manager to avoid duplicate administrative procedures.

(ii) New or modified sources which are located on Indian Reservations shall be subject to procedures set forth in paragraphs (d) and (e) of this section. Such procedures shall be administered by the Administrator in cooperation with the Secretary of the Interior with respect to lands over which the State has not assumed jurisdiction under other laws.

(iii) Whenever any new or modified source is subject to action by a Federal Agency which might necessitate preparation of an environmental impact statement pursuant to the National Environmental Policy Act (42 U.S.C. 4321), review by the Administrator conducted pursuant to this paragraph shall be coordinated with the broad environmental reviews under that Act, to the maximum extent feasible and reasonable.

(5) Where an owner or operator has applied for permission to construct or modify pursuant to this paragraph and the proposed source would be located in an area which has been proposed for redesignation to a more stringent class (or the State, Indian Governing Body, or Federal Land Manager has announced such consideration), approval shall not be granted until the Administrator has acted on the proposed redesignation.

(e) Procedures for public participation

(1) (i) Within 20 days after receipt of an application to construct, or any addition to such application, the Administrator shall advise the owner or operator of any deficiency in the information submitted in support of the application. In the event of such a deficiency, the date of receipt of the application for the purpose of paragraph (e) (1) (ii) of this section shall be the date on which all required information is received by the Administrator.

(ii) Within 30 days after receipt of a complete application, the Administrator shall:

(a) Make a preliminary determination whether the source should be approved, approved with conditions, or disapproved.

(b) Make available in at least one location in each region in which the proposed source would be constructed, a copy of all materials submitted by the owner or operator, a copy of the Administrator's preliminary determination and a copy or summary of other materials, if any, considered by the Administrator in making his preliminary determination; and

(c) Notify the public, by prominent advertisement in newspaper of general circulation in each region in which the proposed source would be constructed, of the opportunity for written public comment on the information submitted by the owner or operator and the Administrator's preliminary determination on the approvability of the source.

(iii) A copy of the notice required pursuant to this subparagraph shall be sent to the applicant and to officials and agencies having cognizance over the locations where the source will be situated as follows: State and local air pollution control agencies, the chief executive of the city and county; any comprehensive regional land use planning agency; and any State, Federal Land Manager or Indian Governing Body whose lands will be significantly affected by the source's emissions.

(iv) Public comments submitted in writing within 30 days after the date such information is made available shall be considered by the Administrator in making his final decision on the application. No later than 10 days after the close of the public comment period, the applicant may submit a written response to any comments submitted by the public. The Administrator shall consider the applicant's response in making his final decision. All comments shall be made available for public inspection in at least one location in the region in which the source would be located.

(v) The Administrator shall take final action on an application within 30 days after the close of the public comment period. The Administrator shall notify the applicant in writing of his approval, conditional approval, or denial of the application, and shall set forth his reasons for conditional approval or denial. Such notification shall be made available for public inspection in at least one location in the region in which the source would be located.

(vi) The Administrator may extend each of the time periods specified in paragraph (e) (1) (ii), (iv), or (v) of this section by no more than 30 days or such other period as agreed to by the applicant and the Administrator.

(2) Any owner or operator who constructs, modifies, or operates a stationary source not in accordance with the application, as approved and conditioned by the Administrator, or any owner or operator of a stationary source subject to this paragraph who commences construction or modification after June 1, 1975, without applying for and receiving approval hereunder, shall be subject to enforcement action under section 113 of the Act.

(3) Approval to construct or modify shall become invalid if construction or expansion is not commenced within 18 months after receipt of such approval or if construction is discontinued for a period of 18 months or more. The Administrator may extend such time period upon a satisfactory showing that an extension is justified.

(4) Approval to construct or modify shall not relieve any owner or operator of the responsibility to comply with the control strategy and all local, State, and Federal regulations which are part of the applicable State Implementation Plan.

(f) Delegation of authority

(1) The Administrator shall have the authority to delegate responsibility for implementing the procedures for conducting source review pursuant to paragraphs (d) and (e), in accordance with subparagraphs (2), (3), and (4) of this paragraph.

(2) Where the Administrator delegates the responsibility for implementing the procedures for conducting source review pursuant to this section to any Agency, other than a regional office of the Environmental Protection Agency, the following provisions shall apply:

(i) Where the agency designated is not an air pollution control agency, such agency shall consult with the appropriate State and local air pollution control agency prior to making any determination required by paragraph (d) of this section. Similarly, where the agency designated does not have continuing responsibilities for managing land use, such agency shall consult with the appropriate State and local agency which is primarily responsible for managing land use prior to making any determination required by paragraph (d) of this section.

(ii) A copy of the notice pursuant to paragraph (e) (1) (ii) (c) of this section shall be sent to the Administrator through the appropriate regional office.

(3) In accordance with Executive Order 11752, the Administrator's authority for implementing the procedures for conducting source review pursuant to this section shall not be delegated, other than to a regional office of the Environmental Protection Agency, for new or modified sources which are owned or operated by the Federal government or for new or modified sources located on Federal lands; except that, with respect to the latter category, where new or modified sources are constructed or operated on Federal lands pursuant to leasing or other Federal agreements, the Federal land Manager may at his discretion, to the extent permissible under applicable statutes and regulations, require the lessee or permittee to be subject to a designated State or local agency's procedures developed pursuant to paragraphs (d) and (e) of this section.

(4) The Administrator's authority for implementing the procedures for conducting source review pursuant to this section shall not be redelegated, other than to a regional office of the Environmental Protection Agency, for new or modified sources which are located on Indian reservations except where the State has assumed jurisdiction over such land under other laws, in which case the Administrator may delegate his authority to the States in accordance with subparagraphs (2), (3), and (4) of this paragraph.

(39 FR 42514, Dec. 5, 1974; 40 FR 2802, Jan. 16, 1975, as amended at 40 FR 24535, June 9, 1975; 40 FR 25005, June 12, 2975; 40 FR 42012, Sept. 10, 1975)